

The Mining Journal.

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1357.—Vol. XXXI.

LONDON, SATURDAY, AUGUST 24, 1861.

{ STAMPED.....SIXPENCE.
{ UNSTAMPED..FIVEPENCE.

MR. JAMES CROFTS, SHAREBROKER,
No. 1, FINCH LANE, CORNHILL. (Established 17 years.)
Mr. Crofts is a BUYER of shares in the following mines (cash on receipt of transfer, or exchanges made for other shares):—Brynford Hall, Herward United, Great Marthia, East Caradon, Great South Tolgus, Herodfoot, Wheal Norria, Marke Valley, North Miners, North Downs, and Wheal Grylls, Camborne, South Miners.
The following FOR ABSOLUTE SALE, all calls paid, Mr. Crofts having no limits:—23 Rosewarne and Herland, 100 Worras Downs, 20 East Treskerby, 20 North Buller, 40 Penha Moor, 20 Cornubia.
The section of the late Lumbroose Wheal Maria Mine, now leased by the EAST WHEAL MARTHIA COMPANY, in 6000 shares, has excellent chances of success. Mr. Crofts having acted as secretary to the Lumbroose for nearly ten years is acquainted with the merits of the new mine, and will answer enquiries from the investing public.
* Holders of mining shares DIFFICULT OF SALE in the OPEN MARKET may hear of purchasers, and also parties IN ARREAR OF CALLS, or sued by merchants, may learn their true legal position and be advised how to act, by applying to Mr. Crofts. SPECIAL BUSINESS IN EAST WHEAL MARTHIA (LIMITED) paid-up shares, £2 10s. each.

MR. JAMES LANE, No. 44, THREADNEEDLE STREET, LONDON, E.C.
JAMES LANE has FOR SALE, at nett prices:—20 Alfred Consols, £1; 5 Billins, £18; 20 Crebor, 12s.; 60 Devon Union, £2; Ding Dong, £15; 50 Dale, 15s. 6d.; 10 East Caradon, £25½; 10 East Russell, £3½; 20 Great Wheal Marthia, 34s.; 20 Great Retalack, 21s.; 5 Gomanens, £2½; 2 Herodfoot, £36; 2 Kilmore, £35; 20 Lady Bertha, 16s.; 5 Ludcott, £3½; 2 Mary Ann, £9; 10 Marke Valley, £10½; 20 North Hallenbeagle (£1 paid), 21s.; 20 North Downs, £4½; 20 North Nant-y-Mwyn, 5s.; 2 Pant-y-bonarth, £6½; 20 Penha Moor, £1½; 2 Rosewarne Consols, 40 South Condurrow, 9s. 6d.; 2 Treawny, £13½; 2 Wheal Hecle, £9; 2 West Caradon, £36; Wheal Anne, 20s.; 20 Ribden, 5s.; 20 Sorridge, 12s.; and 5 West Rosewarne, £12.
Mr. LANE has 20 shares in Turner's Patent Mill Strap Company (Limited), £5 paid, for which he solicits an offer.

THE ADVANCE IN THE PRICE OF COPPER has had a beneficial effect on the Mining Market, and caused a considerable enquiry for shares, not only amongst those that had been depressed, but for others that had remained firm of late. An advance has consequently ensued in the price of shares, the scarcity of stock precluding the completion of numerous orders with limits, whilst the rise is accelerated by many speculative individuals (who had bona fide sold with the expectation of repurchasing at less) being amongst those who are offering higher prices to repossess their stock. Intending purchasers are advised to buy for cash, and to insist upon an immediate completion of the transactions, for it has been painfully obvious to holders of mining property of late that the recent depression has been very materially influenced and aided by permitting business to be done with, and by, the advocates of the account business, and thus enable the bearing dealers to succeed with impunity. Judging by the indications of the few past days, the buoyancy of the market is likely to be considerably maintained, and those immediately purchasing will doubtless derive ample profits for the outlay. Shares in the following procured either on commission or at nett prices (if practicable), at the option of the purchaser; but applicants, to avoid the loss likely to arise from the delay in correspondence on a rising market, are advised to send positive instructions with limits at first:—Basset, South Frances, West Caradon, West Seton, Wheal Seton, East Basset, East Caradon, 5s. 10s., Wheal Margaret, Providence, Wheal Margery, Wheal Treawny, Wheal Mary Ann, North Rosker, or any other mine known in the London market.

Sales effected on the above terms for cash.
Bankers: London and Westminster Bank, Lothbury.
JAMES D. BRENDLEY, Sharedealer, 74, Old Broad-street, London, E.C., Aug. 23, 1861.

PETER WATSON, ENGLISH AND FOREIGN STOCK, SHARE, AND MINING OFFICES,
79, OLD BROAD STREET, LONDON, E.C.
Telegraphic messages to Buy or Sell Mine Shares punctually attended to.

MR. PETER WATSON has returned from Cornwall, and has given a full account of mines in his "WEEKLY MINING CIRCULAR AND SHARE LIST," of yesterday (with recommendations as to the best and cheapest mines for immediate investment), which can be had on application.
79, Old Broad-street, London, E.C.

SHARES WANTED FOR IMMEDIATE CASH PAYMENT:
25 Stray Park. 50 Wheal Charlotte. 100 Kelly Bray.
1 Carn Brea. 25 West Frances. 35 West Wh. Providence.
35 Wheal Grylls. 5 East Basset. 80 S. Caradon Wh. Hooper.
20 Rose Hill & Ransom U. 10 West Caradon.
Application to PETER WATSON, stating lowest price.

STRAY PARK MINE.—Several shareholders having been lately intimidated to sell their shares at ridiculously low prices, some having been done at £24, and below, a word of caution and advice to others may not be out of place.—Have the mine inspected. The shares leave off Friday night at £32, "buyers;" and if reports be true these shares are likely to be as high as ever they were—some months ago at £66. The mine adjoins Dolcoath, and on the same lodes.

MR. W. LELEAN, MINE SHAREBROKER,
11, ROYAL EXCHANGE, LONDON, E.C.

MR. J. S. PHILLIPS, C.E. AND M.E., SHAREBROKER, & C.,
12, ST. MICHAEL'S ALLEY, CORNHILL, LONDON, is now on a tour through the Cornish mines.

MR. T. ROSEWARNE begs to inform his friends that he has REMOVED from 81 to 75, OLD BROAD STREET, LONDON, E.C.
T. ROSEWARNE has FOR SALE:—
Drake Walls, 15s. 6d. Herodfoot, £35. So. Wh. Margaret, 7s. 6d.
East Russell, £3½. Lady Bertha, 17s. Wheal Ludcott, £33½.
East Caradon, £25½. North Rosker, 10s. West Bryn Gwlog, £24½.
East Devon Consols, 40s. North Treskerby, £22. W. Rose Down, £24½.
East Grenville, 39s. North Downs, £4½. Wheal Seton, £80.
Gawton United, 48s. North Treawny, 4s. 6d. Wheal Edwaid, 36s.
Grumb. & St. Aubyn, £12. So. Caradon Hooper, 25s. Wheal Arthur, 10s.
Hingston, 40s. Stray Park, £32. Wheal Norria, 38s. 6d.
Okei Tor, 30s. Sorridge, 12s. West Caradon, 39s.
Fowey and Par. 11s. 3d. Galatoc Consols. West Polmear. Wheal Wrey.
An OFFER WANTED for— Brookwood. Peilyn Wood. Bedford Consols.
T. ROSEWARNE can recommend six mines safe for a great rise within six months.
Bankers: Bank of London.
August 23, 1861.

GEORGE RICE, SHAREBROKER, 1, FINCH LANE, CORNHILL, can BUY or SELL for cash or account, close prices:—
East Caradon Consols. Great Retalack. Stray Park.
Deep Level. Herodfoot. Tolvaaden.
East Russell. Lady Bertha. West Caradon.
East Grenville. Marke Valley. Wheal Unity.
East Caradon. North Miners. Wheal Seton.
Grumbler and St. Aubyn. North Downs. Wheal Edwaid.
Bankers: Bank of London.

MR. R. H. M. JACKMAN, MINING AND SHAREBROKER,
No. 2, ADAMS COURT, OLD BROAD STREET, E.C.
Has FOR SALE, free of commission:—1 St. Ives, £31.
20 North Downs, £4½. 20 Wheal Wrey, 5s. 6d. 5 Ding Dong, £17.
20 Ludcott, £3½. 4 Great Fortune, £11½. 100 Guriy, 7s. 3d.
5 West Rose Down, £21. 20 Tolvaaden, £2½. 5 Penha Moor (an offer wanted).
20 Alfred Consols, 21s. 50 Unity, 21s. 50 West Caradon.
Mr. JACKMAN is a BUYER of Stray Park, Carn Brea, Uney, and West Caradon.
Aug. 23, 1861. Bankers: London and Westminster, Lothbury.

MR. E. GOMPERS, MINING OFFICES,
3, CROWN CHAMBERS, THREADNEEDLE STREET, LONDON, E.C.
BUSINESS TRANSACTIONS IN BRITISH AND FOREIGN STOCKS AND SHARES.
Terms, 1½ per cent.—Bankers: London and Westminster Bank.

MR. GEORGE BUDGE, SHAREBROKER, No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 14 years), has FOR SALE the following shares:—3 Long Rake; 4 Herward United, £11; 50 North Miners, 20s. 6d.; 5 East Caradon, £25½; 50 Dale, 14s. 3d.; 2 West Caradon, £41; 20 Crelake, £3½; 100 Great Trevedoe, 10s.; 4 Old Tolgus United, £12½; 25 Tolvaaden, £3½; 100 East Wheal Marthia, £12½; 50 Lady Bertha, 17s.; 50 West South Caradon; 20 Sorridge Consols, 12s.; 25 Wheal Moyle; 50 Great Wheal Marthia; 60 East Grenville, 38s. 6d.; 25 Tolcarne, £25½; 100 East Rosewarne; 60 Ribden, 4s. 9d.; 5 Marke Valley, £10 3s. 6d.; 20 Great South Tolgus, £4½; 100 North Nant-y-Mwyn, 4s.; 70 Great Retalack, 19s. 6d.; 25 Merilyn, 20s.; 5 Brynford Hall; 10 Camborne Vein; 1 South Frances, £125½; 10 Tincroft, £25½; 50 Wheal Hecle; 50 Wheal Arthur, 9s.; 25 North Basset; 50 West Polmear, £1; 2 Wheal Seton, £69; 1 Wheal Basset, £92; 60 Buller and Basset; 2 Bryn Gwlog, £28½; 200 Silver Vein; 20 Pendon, £2½; 20 Nangles; 80 Bon Accord, 22s. 6d.; 5 West Bryn Gwlog.
Mining shares difficult of sale, the holders may find purchasers through Mr. Budge. Daily lists of prices forwarded on application.

GEORGE MOORE, 1, CROWN COURT, THREADNEEDLE STREET.
George Moore will SELL the following SHARES, or any part, to-day, at quoted prices, FREE OF ANY COMMISSION:—100 So. Condurrow, 9s. 3d.
50 East Grenville, 37s. 9d. 100 North Miners (£1 paid, 2 West Caradon, £40½.
45 East Rosewarne, £1½. Limited), 28s. 3d. 50 Wh. Grenville, 33s. 9d.
George Moore is a BUYER of one or two shares in West Seton, at £300.
In any business that George Moore is favoured with, in which he is the buyer, he will give CASH ON RECEIPT OF TRANSFER.

JAMES HERRON has FOR SALE the following SHARES, at the prices quoted, and FREE OF COMMISSION:—
10 Alfred Consols, 19s. 9d. 30 Great Retalack, 19s. 6d.
5 Billins, £17½. 30 Great Wheal Marthia, 34s. 9d.
1 Buller, £1½. 10 Hings. Down, £1 18s. 9d.
2 Brynford Hall. 1 Herodfoot, £33 18s. 9d.
40 Buller and Basset. 5 Herward Utd., £12½.
20 Bon Accord, 19s. 6d. 2 Kitty (Lelant), £6 13s. 9d.
2 Carn Brea, £67½. 30 Kelly Bray, 16s. 9d. x cl.
5 Cobre, £36½. 30 Lady Bertha, 15s. 6d.
30 Cefn Clicen, 14s. 9d., ex call. 40 Lady Eliza, 9s. 9d.
30 Camborne Vein, 9s. 9d. 10 Linars, £7.
5 Craddock Moor, £23½. 5 Long Rake, £11½.
20 Carn Camborne. 10 Ludcott, £3 6s. 9d.
5 Caradon Cons., £7½. 5 Marke Valley, £10½.
5 Cargoll, £14½. 5 Margery, £5 1s.
5 Calvadack, £6 18s. 9d. 20 Merilyn, 13s. 9d.
2 Cook's Kiln, £25 10s. 1 Mary Ann, £8 18s. 9d.
30 Cuddra, 35s. 40 North Miners, 30s. 9d.
5 Cliffland and Wentworth. 5 North Basset, £2 18s. 6d.
20 Central Miners. 2 North Treskerby, £21.
20 Dale, 14s. 6d. 15 North Downs, £4 14s. 9d.
20 Deep Level. 10 North Robert, 14s. 6d.
30 Drake Walls, 15s. 30 New Treleigh, 33s.
1 Devon Great Cons., £35 10s. Nantoes and Penrhwi.
2 Ding Dong. 1 New Seton, £45.
20 East Russell, £3½. 100 North Rhine, 7s. 6d.
10 East Carn Brea, £7. 30 Nant-y-lago, 14s. 9d.
20 East Grenville, 37s. 9d. 15 North Croft, £5 5s.
3 E. Caradon, £25 8s. 9d. 10 New Frances, 9s.
20 English and Australian. 1 North Rosker, £16½.
Copper, £3 10s. 9d. 10 Old Tolgus, £16.
30 East Wheal Marthia, pr. 10 Port Phillip, 21s.
60 East Kongsberg (fully paid up £5), 38s. 6d. 1 Providence, £34½.
2 East Basset, £75½. 50 Prosper United.
10 East Devon Consols. 2 Rosewarne Utd., £23½.
10 Great S. Tolgus, £3½. 20 Rosehill Hill & Ransom, 27s. 9d.
2 Grumbler, £10½. 5 North Buller, £5½.
20 Great Alfred, 8s. 9d. 50 Redmoor, 2s. 6d.
30 Great Moelwyn (£1 10s. paid), 18s. 9d. 50 Ribden, 4s.
10 Gomanens, £2. 10 St. John del Rey, £35½.
30 Great Vor. 10 St. Ives Wheal Allen (an offer wanted).
50 Gt. Northern Copper, 30s. 5 Stray Park, £32½.
1 West Caradon, £39½.
And is a BUYER of 100 Rosehill Hill & Ransom, 30 Drake Walls, 100 West South Caradon, 100 North Miners, 5 Treawny, and 50 Carn Camborne.
2, Adams-court, Old Broad-street, August 23, 1861.

MESSRS. VIVIAN AND REYNOLDS, 68, OLD BROAD STREET, LONDON, E.C., MINING ENGINEERS, INSPECTORS OF MINES, COMMISSION, AND GENERAL AGENTS FOR THE PURCHASE OR SALE OF MINE SHARES, RAILWAY, AND EVERY OTHER DESCRIPTION OF STOCK.
Commission on share transactions, 1½ per cent. on £100 and above, and 2½ per cent. for less sums.

MR. C. POWELL, MINE SHAREBROKER,
2, SPREAD EAGLE COURT, FINCH LANE, LONDON, E.C.

MR. EDWARD COOKE, 5, HERCULES PASSAGE, THREADNEEDLE STREET, LONDON, E.C., will feel much pleasure in advising those who may favour him with their confidence on the merits of the various mines usually dealt in, and also on any new concerns that are from time to time brought before the notice of the public. Much loss and disappointment may be prevented by a proper amount of caution on the part of the investor. From frequent personal visits into the mining districts, together with many years' experience of the mining market, EDWARD COOKE hopes to be enabled to render sound advice to parties availing themselves of his services, and prompt cash in all transactions entered into his charge.
PURCHASES AND SALES IN RAILWAY AND ALL OTHER SHARES effected at the usual commission.
Aug. 23, 1861. Bankers: London and Westminster, Lothbury.

JOHN RISLEY, SHAREBROKER,
82, LOMBARD STREET, LONDON, E.C.

MR. THOMAS SPARGO, SHAREBROKER,
224 and 225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C.
Commission, 2½ per cent.

RICHARD CLIFT, MINE SHAREDEALER,
late of Redruth, now 48, THREADNEEDLE-STREET, LONDON, where all letters are to be addressed.

WILLIAM SEWARD, MINING BROKER, STOCK AND SHAREDEALER, 36, THROGMORTON STREET, LONDON, E.C.
Commission, 1½ per cent. on £100 and above, and 2½ per cent. on less sums.

MESSRS. R. HORLEY AND CO., SWORN STOCK, SHARE, AND MINING BROKERS, 45, CORNHILL, E.C. (late of 2, Royal Exchange-buildings), continue to TRANSACT EVERY DESCRIPTION OF MINING BUSINESS, and are in a position to obtain reliable information respecting all dividend and progressive mines.
N.B.—Messrs. HORLEY and Co. publish a Weekly Mining List, with the closing prices every Wednesday, and will be most happy to forward the same (gratis) on application.

MR. JAMES HUME, SHAREBROKER, 74, OLD BROAD STREET, LONDON, E.C., can SELL the FOLLOWING:—
10 North Downs, £4½. 100 Crebor, 11s. 6d. 10 East Carn Brea, £8.
50 Great Retalack, 20s. 1 Stray Park, £32. 10 Uney, £4½.
50 Unity, 21s. 6d. 10 North Rosker, 38s. 20 East Russell, £3½.
50 East Grenville, 38s. 6d. 10 Wheal Wrey, 6s. 20 Lady Bertha, 17s.
J. Hume's "Mining Share Monitor" is issued the first week in each month, and supplies the most correct data respecting rising, progressive, and dividend mines. Subscription, 5s. per annum; or 6d. per copy.

MR. GEORGE BATTERS, 5, COWPER'S COURT, BIRCHIN LANE, DEALER IN BRITISH MINING SHARES AND OTHER SECURITIES.
Mr. BATTERS, from long experience and intimate acquaintance with all Mining Stocks, can advise as to investment of capital, at closest market prices, and has made a selection of Dividend paying and sound Progressive Stocks into which he can with confidence recommend investments at present depressed prices. The favourable turn in the market for metals, and the reduction in the Bank's rate of interest, would point to prices having seen their lowest for the present.
Mr. BATTERS is a BUYER of West Bryn Gwlog, Bryn Gwlog, North Miners, Billins, Brynford, Herward, South Carn Brea, Carn Brea, Cook's Kitchen, Crookhaven, and Great Wheal Marthia shares at market prices; and is a SELLER of 20 East Caradon, £25½; 20 Marke Valley, £10½; 100 Great Marthia; 50 North Miners, 20s. 6d.; 60 South Caradon, £3½; 2 Carn Brea, £70.

JOHN GLEDHILL AND CO., MINE AGENTS AND SHAREBROKERS, MINING OFFICES, CORN EXCHANGE, LEEDS.
STOCK AND CO. LEAD AND SILVER SMELTERS,
PENCLAWDD, NEAR SWANSEA.

MESSRS. THOMAS PENROSE AND THOMAS PRICE UNDERTAKE ASSAYS AND ANALYSES OF EVERY DESCRIPTION OF MINERAL PRODUCT, FUEL, AND MANURES, at Messrs. Richardson and Co.'s Assay Office and Laboratory, Copper Ore Wharves, Swansea.

MR. J. SYKES, LEEK, STAFFORDSHIRE, is in a position to advise speculators as to the purchase of shares which will increase in value 100 per cent. in twelve months. The opportunity should not be lost. He will guarantee 25 per cent. of the loss, if he be allowed 25 per cent. of the profits.
FOR SALE:—10 Great Retalack, 20s. WANTED:—50 Dale, state lowest price.

MR. MURCHISON'S REVIEW OF BRITISH MINING FOR THE QUARTER ENDING 30th MARCH, 1861, is NOW READY.
Price One Shilling. At 117, Bishopsgate-street Within, London, E.C.

MR. T. P. THOMAS, MINING AGENT AND AUCTIONEER, 2, CROWN COURT, THREADNEEDLE STREET, LONDON.

MR. T. E. W. THOMAS, MINING AGENT AND GENERAL MINING SHAREDEALER, 16, HACKINS HET, LIVERPOOL.

JOHN R. PIKE, GENERAL SHAREDEALER,
3, PINNERS COURT, OLD BROAD STREET, E.C.

FREDERICK WILLIAM MANSELL, MINING OFFICES,
1, HATTON COURT, THREADNEEDLE STREET, LONDON, E.C.
Bankers: London Joint-Stock Bank.

MR. JOSEPH GREGORY, MINING OFFICES,
1, BANK CHAMBERS, LOTHBURY, E.C.
BUSINESS TRANSACTIONS IN BRITISH AND FOREIGN STOCKS AND SHARES.
Terms, 1½ per cent. on £100 and above, 2½ per cent. on smaller sums.
Bankers: City Bank, Threadneedle-street.

MR. JAMES HAMMON, STOCK AND SHAREDEALER,
1, CROWN COURT, THREADNEEDLE STREET, LONDON.

MR. H. G. YEULETT has REMOVED his OFFICES to ST. MICHAEL'S CHAMBERS, CORNHILL, where he continues to TRANSACT BUSINESS IN MINING, RAILWAY, BANK, AND BRITISH AND FOREIGN STOCKS AND SHARES OF EVERY DESCRIPTION.
H. G. YEULETT has BUSINESS in the FOLLOWING SHARES:—
East Caradon. Drake Walls. Marke Valley.
East Russell. Dale. North Downs.
HEMATITE IRON ORE.—A SETT of this MINERAL FOR SALE.
August 23, 1861.

MR. F. PRYOR, of REDRUTH, Manager of West Caradon, St. Day United, North Downs, Treawny, North Treskerby, and other mines, REQUESTS the FAVOUR of his friends ADDRESSING HIM in future AS ABOVE, and not as Captain Pryor, as several mistakes have recently occurred in consequence of important communications being so addressed.—August 21, 1861.

MESSRS. C. TOOKEY, F.C.S. AND M. W. JOHNSON, F.C.S.,
ASSAYERS, ANALYSTS, AND CONSULTING CHEMISTS.
LABORATORIES, 44, LINCOLN'S INN FIELDS, W.C.

£10 REWARD.—LOST, FIFTEEN SCRIP CERTIFICATES in TINCROFT MINING COMPANY, Nos. 1, 397, 411, 461, 493, 494, 496, 537, 539, 562, 696, 767, 777, 842, and 950, of no use but to the advertiser, proper notice having been given at the offices of the company, and at the Stock Exchange. Whoever may have found these certificates, and will deliver them to the secretary, HIRSH WILLIAMS, Esq., No. 1, Winchester-buildings, Old Broad-street, London, shall be paid the above reward.

DEVON NEW COPPER MINING COMPANY (LIMITED).—THREE HUNDRED AND FIFTY paid-up (£2) SHARES in this mine TO BE SOLD, at £1 per share.—Apply to Messrs. Ellis and Co., No. 2, Royal Exchange-buildings, London.

SILVER VEIN MINES.—TO BUYERS OF SILVER ORES.—PARTIES DESIROUS OF PURCHASING about TWENTY TONS of the aforesaid may take samples from bulk, or samples thereof will be immediately forwarded by application to the company's works, Lostwithiel, Cornwall.
E. SQUIRE.
August 21, 1861.

STEATITE, OR SOAP-STONE.—Some parties are READY to ENTER INTO CONTRACTS for the SUPPLY of this ARTICLE in ANY QUANTITY.—Address, "T." care of Mr. Vickers, 2, Cowper's-court, Cornhill, E.C.

COPPER AND LEAD MINES IN MONTGOMERYSHIRE.—TO BE DISPOSED OF, IN SHARES, most PROMISING WORKS, within five miles of the contemplated railway to Llanfyllin from Oswestry.—Apply to Mr. RYLE, solicitor, Llanfyllin.

WANTED, in the LONDON OFFICE of EXTENSIVE IRONMASTERS, a CLERK CONVERSANT with the PRICING and INVOICING of IRON, and COMPETENT to CONDUCT the CORRESPONDENCE in the SALE DEPARTMENT. The produce of the works consists of merchant bar, railway, hoop, sheet, plate, sash, angle, and other iron, and a preference will be given to anyone who may have had experience in the above capacity, at whose house such descriptions of iron have been made.—Apply by letter, with references, stating age and salary expected, to "F. G.," 26, Little Bell-alley, London.

WANTED, a SITUATION as MINE AGENT or GENERAL INSPECTOR, in ANY of the MINES either in SOUTH or NORTH WALES, where he has been engaged for the last 19 years, and is thoroughly conversant with all its branches. Testimonials of capability and respectability can be shown on application to "A. Z.," Mining Journal office, 26, Fleet-street, London.—August 23, 1861.

NEW QUARTZ CRUSHER.—A gentleman has the DISPOSAL of an AMERICAN INVENTION for CRUSHING QUARTZ, capable of reducing to powder 7 to 8 tons per day with 5 horse power. The machine can be sold for less than £20.—For particulars, address "C. W. L.," Mining Journal office, 26, Fleet-street, London, E.C.

STEAM STAMPING AND WINDING ENGINE WANTED.—WANTED, a 24 to 30 in. cylinder STEAM WHIM and STAMPING ENGINE, with 16 to 24 heads of stamps (iron lifters), and with any dressing-floors, tools, &c., for a tin mine near Marazion.—Application to be made immediately, with full particulars and price, to J. W. DUNFORD, 5, Adams-court, Old Broad-street; or PETER WATSON, 79, Old Broad-street, London, E.C.

TO MINE AND QUARRY OWNERS AND LESSEES.—OWNERS of good PROPERTY DESIROUS OF FORMING a PUBLIC COMPANY for PURCHASING or WORKING the SAME CAN HAVE on moderate terms the VALUABLE ASSISTANCE of the ADVERTISER.—Apply by letter, to "L. L. C.," 103, Cheapside, City.

TO CAPITALISTS IN CONNECTION WITH THE COAL AND IRON TRADES.—WANTED, by an IRON or COALMASTER, a PARTNER or PARTNERS, who can furnish about £10,000 by instalments, and keep £5000 to be further brought in, if required, within a period of two or three years, making together £15,000, for a MOIETY of a PIG IRONWORK and EXTENSIVE COAL WORKS in WALES, which are capable of an immediate return, and with a little further outlay (part of the capital now required) will make a profit exceeding £20,000 per annum fixed, certain, and free from risks. The property is a most eligible one, on the South Wales Railway, near the best Welsh ports, within an 8s. ride of London, and where forge pig and foundry pig of the best quality, as well as tin-plate pig-iron, can be made at an average cost of 35s. per ton, and coal put in the railway wagons on the rail at 3s. per ton, with most extensive markets open. The property is extensive, and contains abundance of the best coal, house, steam, iron making, and coking, as well as black band, claystone, and hematite ore, of which there is a fine field, known as the Llantrisant Mine. The railway passes through the property.—Apply to "E. D.," Mining Journal office, 26, Fleet-street, London, E.C.

TO COLLIERY PROPRIETORS.—IMPROVED SELF ACTING TIPPLERS and SCREENS, for LOADING COALS at the PITS with dispatch, and ENTIRELY PREVENTING BREAKAGE. Manufactured by WILLIAMS and MOWLE, Egerton-street Foundry, Chester, where models and testimonials may be seen, and every information obtained. Prices moderate. Delivered at any railway station.

A LARGE FORTUNE may be REALISED for ONE POUND only.—For particulars, apply to Mr. FREDERICK SIXT, banker, of Frankfurt-on-the-Maine, or letters addressed to him, 28, Clement's-lane, Lombard-street, London.

NICKEL AND COBALT REFINING, AND GERMAN SILVER WORKS, 16, OZZELL STREET NORTH, BIRMINGHAM.
STEPHEN BARKER begs to inform the Trade that he has the following articles for sale:—REFINED METALLIC NICKEL. OXIDE OF COBALT. [WIRE, &c.] REFINED METALLIC BISMUTH. GERMAN SILVER.—IN INGOTS, SHEET NICKEL AND COBALT ORES PURCHASED.

CHARLES DAVEY AND CO.,
SAFETY FUSE MANUFACTURERS,
ST. HELEN'S JUNCTION, LANCASHIRE.

THE MIDLAND IRON COMPANY, ROTHERHAM,
MANUFACTURERS of BEST "YORKSHIRE," and of STEEL IRON TYRE BARS, for LOCOMOTIVE ENGINE, CARRIAGE, and WAGON WHEELS. Also of REFINED, SCRAP, STEEL IRON and "YORKSHIRE" BARS, HOOPS, RAILS, ANGLE IRON, MALLEABLE SHAFTS, AXLES and FORGINGS.

Original Correspondence.

PRACTICAL PAPERS ON COLLIERY OPERATIONS—No. XI.
REMARKS ON FAULTS, DISLOCATIONS OF STRATA, &c., IN CONNECTION
WITH THE WORKING OF COLLIERIES.

SIR,—The subject under consideration is one that may be considered to belong to the science of geology, but as no series of papers on practical mining could be considered complete without embracing this subject, and as very little information of a really practical nature concerning faults is to be found in works on geology, I have been emboldened to offer the following remarks, and in so doing will try to give information of that kind that may be of service to those having to conduct mining operations.

First, I would remark that faults differ in their character in almost every locality, and consequently no general rule can be laid down for crossing faults, or recovering the coal, in the most economical manner, when it has been thrown out of its position by a dislocation; and I may further remark that some coal fields are much freer from faults than others, and that the greatest possible difference exists in the same coal field. It is true that some of the large faults are well defined, and can be traced with great regularity for a distance, in some instances, of 30 or 40 miles. I have seen a level exceeding 2000 yards in length with not the slightest fault or hitch in the whole distance; and in the same coal field, in driving a distance of 1000 yards, five distinct and separate faults, all downthrows to the south-west, have been met with, and in the aggregate the distance that the coal was thrown down exceeded 150 yards, which was pretty equally divided amongst the five faults. It is as well to remark that this portion of the coal field bears unmistakable proofs that it has been subjected to violent force, or contortion, since it was deposited in its position, the various seams of coal, and their accompanying strata, being almost vertical, as well as the millstone grit that the coal reposes upon. The mind of man appears to be unequal to the task of conceiving the vast period of time that has elapsed since the same spot was covered by a rank and luxuriant vegetation sufficient to produce a single seam of coal such as is to be found in the North Staffordshire coal field; but when we take into consideration the astounding fact that the aggregate thickness of the various seams of coal exceed 140 ft., and that from their high angle of inclination near to Congleton-edge, which is the apex of the triangle that forms this coal field, much may be added to their thickness when compared with seams lying almost horizontally.

It is enough to make the mind of the strongest grow dizzy, and be lost in the abyss of time, when making the attempt to conceive a period so remote as when the first seam of coal reared its head in the form of a huge forest, and felt the effects of the rays of a tropical sun. The task of accounting for, or even conceiving, the subsequent changes that have taken place since the first forest became submerged is still more difficult, but it is easy and clear to see that some immeasurable force has been required to raise the upper seams of coal in this locality more than 1000 ft. above the level of the sea. Other peculiar features are also to be found in this coal field: the strata and seams of coal undergo a complete curvature, so as to change the line of level from 45° or 50° south-west and north-east to nearly due north and south. On one side of the fault that produces this change the coal is found at an angle of inclination of 50° and upwards, and on the other side at an angle not exceeding 18° or 20°, sometimes much below this. The change is wrought in such a small area, that sometimes coal is worked from the same shaft at both angles of inclination. In another district that I am acquainted with, which extends over several miles, the peculiarity exists of all the faults being downthrows to the south-west to a certain point, and from that point all being upthrows in the same direction. It is hardly necessary to say that when numerous faults are met with they greatly lessen the profits of working; in fact, that they are one of the greatest drawbacks that a colliery can have.

Those who are unacquainted with mining may easily conceive the disadvantage arising from driving the wagon-roads through rock instead of coal; yet this is not the greatest disadvantage that is to be found in connection with faults. They have, however, their advantages, as it often happens that mines are brought into workable depths by a fault or upthrow, when if no such thing had happened the angle of inclination or dip of the mine would have carried the seams far below workable depths. They also often serve to keep the water from draining from one colliery to another, and even from different parts of the same colliery. If it is intended to discontinue working one part of a colliery before the other, faults are sometimes left uncut, for no other purpose than to keep back the water. And it is sometimes wise to adopt this course, and bear with the extra expense incurred by having extra shafts, engines, &c., rather than to connect a colliery so as to have to pump the whole of the water, whether one portion of the colliery is worked out 20 or 30 years before the other or not. Some collieries are detached by working up to a fault for each boundary, and when so the owners need be under no fear of having to pump the water of the adjoining colliery in the event of it ceasing working, as a very slight fault acts as an effectual barrier in keeping back almost any quantity of water. Sometimes faults are found of great magnitude, and bring into working position many mines that have cropped out (as it is technically termed) by a downthrow. One of the most remarkable faults of this kind is the Great Pendleton and Ringley Fault, near Manchester. This fault ranges along the course of the Irwell, and is a downthrow to the north-east of 1000 yards at the least. By this fault all the upper mines, that have cropped out over a considerable area, are again brought into position, and, as it were, an entirely new field presents itself at the point where nothing but the lower series of mines would have been met with had it not been for the fault referred to. On one side of the fault the lower mines in the middle series are being worked, and on the other side the uppermost series of mines in the kingdom are to be found. The change is wrought within the compass of 200 or 300 yards. There are several other large faults in the South Lancashire coal field, as well as in other coal fields, but the before-mentioned answers the purpose for which I introduced it—that of cautioning geologists and others against forming too hasty conclusions as to where certain seams of coal are and are not to be found, especially so when the faults are unattended with any of those physical changes that are often to be found on the surface.

It was long thought and asserted by the late Mr. Loochie, the geologist, and others that no coal was to be found within a reasonable distance of the north-east side of the Pendleton great fault, an idea that has since been proved to be erroneous, by coal having been found by Messrs. Stott and Ellam, by boring and subsequently by sinking.

It may not be amiss here to mention what the writer considers a phenomenon; at all events, it is an unusual occurrence, and one that ought to be known. On three different occasions, and in different localities, the upper seams of coal and strata have been regular in position, whilst an underseam has been altogether absent from the series. In one of the cases the roof and floor of the mine were there, but the coal absent; in the other two there were no traces that the position where the mines should have been could have been identified by.

It was long considered unnecessary, and is so yet by many, to bore for an under seam, and that no fear need be apprehended of the bottom mines being right if the upper ones are so; but, for my own part, I think it is necessary to take into consideration the probability of a mine being absent before either purchasing an estate or sinking shafts. In one of the cases referred to, two shafts were sunk and expensive machinery erected, it never being doubted that the mine they were sinking for would not be there. From what we can at present see, the whole of the middle and lower series of mines are absent in the Manchester coal field; at all events, they are not to be found at anything like the same distance below the upper series as they are found and worked at Pendleton and other places.

Sometimes a mere fissure is found, without the displacement of the rock that has been severed by the fissure; whilst at other times the miner comes in contact with a face of dirt, without meeting with the ordinary appearances of a fault, or being able to perceive any dislocation of the strata, or displacement of the coal, by either upthrow or downthrow. Sometimes the distance across the dirt that occupies the position that the coal should do is 6 or 8 yards, at other times not more than a few feet. Sometimes the whole seam of coal is absent for the distances named, and the roof and floor of the mine quite as regular as if the coal had been in its proper position, but in the majority of cases a few inches of coal is left at the roof of the mine. The stratum that is injected into the position that the coal should occupy is sometimes so soft that it might almost be dug out with a spade, although both the roof and floor of the mine are of very strong strata. At other times the injected strata are much stronger than either the floor or roof of the mine. These faults, if they may be so termed, are not of common occurrence, excepting in particular mines and localities. In one seam of coal in this locality they are found very frequently.

Another kind of fault that is occasionally found is what I should term

a wreck fault, and, as that term implies, they are composed of almost all kinds of sand, gravel, and stones from the northern drift, clay, and silt. The only one I have ever seen was found at a depth of 75 yards from the surface, and contained almost all conceivable kinds of sands, clay, marl, and stones. Stones with their edges rounded or worn by the rolling motion that had conveyed them from the spot where they had been fractured from some rock. Not the slightest appearance existed of stratification or even order; all appeared to have been heaped confusedly together. Some 40 or 50 yards were driven into it, and for the whole of that distance it presented the same appearance as described. In a seam of coal lying 8 or 10 ft. above the mine where the fault was found, and 5 yards more upon the deep, a level was driven 200 yards past the spot where the fault was found, without meeting with it; and a brow driven up the angle of the mine for a distance of 80 yards, and the coal worked back.

The faults that are usually met with are either what are technically termed upcasts or downcasts, which simply means that the coal and adjoining stratification have either been raised up or pressed downwards by a sudden movement, or by a succession of movements. With the slight information at our command upon this subject, it can only be conjectured how these changes have taken place, or by what means they have been occasioned. It certainly appears more rational that these displacements, or movements, should have taken place at certain intervals than that any upheaval, or depression, of 6000 ft. over any given area should have taken place by one movement. It very frequently happens that there is no difficulty whatever for a practised eye to detect at a glance whether the fault is an upcast or downcast, from its inclination. If it be a downcast, in the direction the level is being driven, the upper part of the fault will be the first to be met with, providing the face is vertical—or, in other words, the fault at the floor will underlie the fault at the roof, and *vice versa* for an upcast. I am now speaking of inclined faults, and, so far as I am able to speak from experience, this is an invariable rule; but occasionally faults are met with that are so nearly vertical that it becomes difficult to determine with accuracy by this rule. Then it is necessary to trust to the appearance which the strata, or slickenside, presents. By careful examination of the slickensides of any fault, it will be seen that the surface presents a polished, irregular appearance, somewhat resembling that of the scales of a fish, one portion overlapping another in nearly the same manner. This appearance is doubtless caused by the enormous friction it has been subjected to at the time of its dislocation. By these appearances anyone who has carefully noticed the slickenside of a few faults will be able to determine the direction the dislocation has taken, and whether the mine has been upheaved or depressed. Sometimes faults are found that are upcasts from both sides, and may be compared in appearance to a triangle, the base of which is the floor of the mine, and the apex at the point where the coal is raised to. These kind of faults are seldom met with: the best plan of crossing one is to keep a straight course after it has been ascertained what kind of fault it is. But faults of such a character are very likely to mislead the most practised eye. The only plan that I know of to meet such cases is to thoroughly understand the nature of the strata overlying and underlying the various seams of coal, and *vice versa* for an upthrow.

In almost all instances the cheapest method of crossing a fault is to drive in the fault slip, or slickenside; but whenever this is done care should be taken that the road which is cut through should not be in the centre of the slip, or the coal may be passed without being noticed. This can only occur when the slip is some yards in width. I know a case where more than 1000 ft. was spent, in consequence of keeping in the middle of the slip, and the coal not found at last; in fact, they became quite confused in what they were doing: the coal has since been found. I have an objection to crossing a fault by driving with the slip, for though it is the shortest way that one can be crossed, and the ground is often a deal better to cut, these advantages are more than counterbalanced by the difficulty that exists in most cases to keep the roof from falling. The plan I have found to answer the best has been, when I have known the extent of the fault from having previously crossed it, if it be a downthrow to come back along the level for 8 or 10 yards, as the case might be, and turn into the higher side, so as to make the curve of the wagon-road more regular.

I may at no distant period enter into this subject at considerable length, and hope that others will be induced to do the same, as from the great want of knowledge upon a subject so important, both in a scientific and practical point of view, it is highly necessary that more should be known than is at present. I consider it of importance that the bearing of each fault, with its angle of inclination and distance of upthrow and downthrow, as the case may be, whether a parallel fault or not, should be deposited with some of our geological societies or mining schools. Many narrow-minded individuals will, I am aware, object to this suggestion, but I am inclined to think that all who are desirous of forwarding the interests of practical mining would gladly acquiesce, provided the matter were fairly put before them.

JOS. GOODWIN.

RATING OF COLLIERIES.

SIR,—The mode of rating collieries to the poor becomes every year more annoying to the coalowners, in consequence, probably, of existing enactments placing them almost entirely in the hands of the assessors, to whose caprice, or want of experience in the valuation of colliery property, the unfortunate colliery owner has to submit. It is true he can appeal to the magistrates, and that in many cases he thus obtains relief; but this appears to me to be a large amount of unnecessary trouble, which might easily be avoided. I have observed from the frequent complaints of adventurers in metallic mines that although the law gives them exemption from taxation to the poor, many of them are compelled by the local authorities to pay poor rates. Now, what I would suggest is the co-operation of the adventurers in metallic mines with the owners of collieries, to obtain the total exemption of all mines, quarries, and mineral works from taxation. It has been stated upon indisputable official authority that 500,000 workmen engaged in mining produce no less than 40,000,000,000 worth of marketable products, and it is universally admitted that it is impossible to find any other 40,000,000,000 worth of products which are so prolific in the results they secure. Destroy the mining and metallurgical industries and our commercial position will be at once lost—we should have no fuel for our machinery, nor, indeed, machinery, except from imported metal, and the manufacture of such an immense number of products would be stopped that not a single individual in the country would escape the disadvantages of the change. Articles which few suppose to be in any way connected with metals would cease to be manufactured. I believe that if co-operation could be secured, and if the advantages resulting to the community at large from mining were fairly represented, there would be no difficulty in obtaining a clear and concise Act exempting all mines and places from which minerals or metallic ores are obtained.

COAL OWNER.

ALUMINIUM SAFETY-LAMPS.

SIR,—The proposition for employing the new metal aluminium as a substitute for iron in the manufacture of gauze for safety-lamps, is certainly one which will receive attention, from its evident novelty; but, from your remarks in last week's Journal, there appear to be several little points which require explanation. First, there is the statement that the white metal does not obstruct the light to the same extent as ordinary gauze; but I recollect that Mr. Reuben Plant patented a lamp which was to produce a very similar effect by employing white galvanised iron gauze. While the gauze continued white the amount of light was, no doubt, greater, but a very short period of use made the wire as black as any other. Will Mr. Bell state whether aluminium possesses any peculiar quality which prevents the smoke from settling upon it? If it does not, I cannot understand what advantage the new metal will possess. But this is, perhaps, the smallest objection to the use of aluminium for safety-lamps. The use of a metal costing 50s. per pound in ingots, and both difficult and expensive to draw into wire, is not one which would aid in producing a cheap lamp. But, assuming that the extreme lightness of the metal would admit of aluminium lamps being sold at as low a price as ordinary ones, there would still be the objection of the fusibility of the metal. I have seen it stated that the heat escaping from an ordinary Argand gas-burner is sufficient to keep the metal soft; and I should be glad to learn what Mr. Bell proposes to do to prevent the melting of his gauze in the event of the lamp being tilted, either accidentally or otherwise.

FERRUM.

Newcastle, Aug. 21.

WHITE GUNPOWDER.

SIR,—“A. Z.” who writes respecting the danger attending the preparation and use of white gunpowder, states that he finds the best way to prepare it is to moisten the ingredients—chlorate of potash, yellow prussiate of potash, and sugar—before grinding them together, and then drying at a moderate heat. Having lately prepared different samples of white gunpowder for some military engineering experiments, I have tried the process

of separately grinding the materials and then mixing them, also the plan adopted by “A. Z.” and find that all those samples which were prepared moist are more easily exploded than those prepared by the dry process. In fact, one sample prepared by the moist process, in an open porcelain vessel, exploded by simple friction with a spatula, with which one of my assistants (J. M. Kenyon) was crushing the dry powder. Through the explosion he was laid up for several weeks, and nearly lost his eyesight. No samples prepared dry are as explosive as those prepared moist, the addition of water causing the particles of the chemical substances to mix more intimately than can be effected by the dry process. This accounts for the greater danger attending the use of the white gunpowder prepared moist over that of the dry process. A cannon loaded with white gunpowder goes off on the application of a drop of vitriol to the touchhole. This property of the gunpowder may possibly be applied to some advantage in the construction and preparation of bombshells for long ranges. The shells would not explode (if filled with white gunpowder and containing a glass vessel with vitriol) until they strike the object. No useless explosion of the shell could take place in the air, as is too often the case with the ordinary fuse shells. Its expansive or explosive force is also more than twice that of ordinary gunpowder. In all experiments performed with white gunpowder, prepared either by the wet or dry process, great care must be taken not to compress the powder too violently, otherwise serious accidents may occur.

F. HUDSON.

Laboratory, Corporation-street, Manchester.

VOLCANIC ACTION.

SIR,—I beg leave to return my thanks to your correspondent, Mr. T. A. Barnes, Whithy, for his kind offer; on my next visit to that neighbourhood I shall avail myself of the opportunity of seeing what your correspondent calls a “calcining product, resulting from volcanic action in an ironstone bed.” I have inspected the liassic and oolitic ferruginous seams along the cliffs in the neighbourhood of Whithy, also the outcrops of the beds, and have seen the ordinary changes in the appearance of the ironstone near the surface, and what would be called by a Cornish miner “the gossans of the beds.” These changes are more or less confined to the surface. When the ironstone becomes gradually dry, and somewhat viscid, the ferruginous water is decomposed, the hydrogen gas is evolved, and red and brown oxides are produced. The bog iron ore presents good examples of these superficial changes.

The superficial beds of hematite, and especially beds of manganese, are very productive in the mammillary and stalactitic forms. These forms are the flowers, or the fruits as it were, of the mineral rocks in and on which they grow. These productions lose all the water of crystallisation during the change, hence they become anhydrous; indeed, these changes may be detected going on on a small scale on the sides of cuttings in ferruginous and calcareous sands in Northampton and many other places. However, as your correspondent thinks that he can show me “calcination resulting from volcanic action” near Whithy, I shall be curious to see it. I have been in volcanic regions, and have seen changes from volcanic action, both in the aqueous and the igneous volcanoes, therefore I shall be able to make comparisons. I hope Mr. Barnes is prepared to prove in a satisfactory manner, by means of the samples *in situ*, that the change observed has been produced by means of volcanic action, and that his opinion is not founded on mere assumption.

EVAN HOPKINS, C.E., F.G.S.

Dublin, Aug. 20.

VOLCANIC ACTION.

SIR,—For the information of Mr. Evan Hopkins, as to the altered coal measures by the intrusion of liquid lava, I would inform him that there can be no doubt that the base of the whole of the South Staffordshire coal field (and, as I believe, nearly every other coal field) is IGNEOUS, which is clearly proved by several outbursts of trap to the surface, and then overlying (in the shape of a mushroom) the coal measures proper. Wherever this trap has burst up it has turned up the ends, or edges, of the different strata in its passage through to the surface, and where it is in contact with coal, or other bituminous matter, it has converted it into what is locally termed “black coal,” or anthracite, and the ironstone is melted and vitrified, and has the appearance of modern blast-furnace cinder, or scoriae. Besides this effect upon the coal and ironstone measures of the passage of trap from below direct to the surface, there are offshoots of trap that have struck off from the parent mass, or “neck,” at from 50 to 150 yards from the surface, which have intruded themselves between the coal seams and ironstone beds for several miles—sometimes below a particular seam, at others above it, according as it met with an obstacle sufficient to turn its course when in a liquid state. Wherever this has taken place, and it is in contact or in close proximity to coal or ironstone, it has *universally* rendered the one anthracite and the other vitreous. This is called *green rock* (having that colour), and has a slightly different appearance to the parent mass from which it comes; where, however, there are smaller offshoots intruding into the coal itself, of only a few inches in thickness, resembling “steigred lightning,” it then has the appearance of *white rock*. If Mr. Hopkins will like to see examples, I should be happy to show him, and you are at liberty to give him my address for that purpose.

Dudley, Aug. 22.

ANTI-AQUEOUS.

A NEW ERA IN MINING—EXCAVATING MACHINERY.

SIR,—In the last number of the *Mining Journal* is a letter relating to Great Wheel Alfred, from a “Local Shareholder,” from which I extract the following:—

3. I believe that machinery may easily be brought to bear in the sinking of shafts especially, so that it shall not only be more expeditious, but also considerably less expensive; indeed, I see no practical obstacle to prevent shafts being sunk 10 or 12 fathoms in the time it now takes to sink 1 fm.—4. I believe that a time will come when Cornish mines will be worked with profit more than double the depth of this mine, which mines will probably not only have engines but also employ horses underground, not using the latter, perhaps, in every level, but in the main levels, which levels, it is likely, will be carried wider and higher.—5. I believe that when the time allotted to comes mining will not be so much of a speculation, but that a greater certainty will be derived from it, because it will be a science better known; when it will not be considered so much as it is now that a “good mine makes a good captain,” but more in the light of the speculation in shipping, where it is a well-known fact that a good captain will make a ship give profit, whereas a bad one will bring ruin on its owners. Now, if the time to which I have alluded ever takes place, the man who can see how to use, and does so, the appliances I have enumerated in their right place will be the man to have as manager in a deep and extensive mine.

Excepting the adoption of horses for underground work, where the principle of gravitation may be made available by the construction of the levels with sufficient gradients to discharge the stuff, either by inclines where the ground would permit of them, or just sufficiently steep as to roll the loaded wagons down with ease, and enable them to be brought back again empty, involving only a trifling amount of manual labour, I not only agree with the writer's belief as to the possibility of sinking shafts and driving levels by machinery, so as to supersede the tedious, expensive, and unsatisfactory use of manual labour in the excavation of the rock, but am now thoroughly prepared to bring its use into effective operation.

No one who has been much engaged in mining pursuits can fail to be aware that there is nothing more fatal to success in laying open and fully developing a mine than the time required for carrying out the underground operations, until at last it has become a general observation “that it requires three companies to make a profitable and paying mine.” A rather painful experience of this evil has induced me for some years to devote particular attention to this important point, by endeavouring to ascertain if machinery could not be constructed to supersede the use of manual labour in sinking and driving, and latterly my time has been engrossed by this occupation, with, I am happy to say, the most satisfactory results, having at last succeeded in producing a machine (to be worked by steam power) to supply this great desideratum.

The cost of this machine for driving will, in the first instance, amount to 1500*l.*, and with it I will guarantee to drive, at least, 1 fathom per diem to 1500*l.*, and with it I will guarantee to drive, at least, 1 fathom per diem. The (my firm belief being that it would drive 2 or 3 fathoms per diem). The cost of one for sinking (with winding-machinery attached to draw the stuff broken from the bottom of the shaft to the plat above, in order to keep the sump free for the sinking machinery) would be 2250*l.*, and with the use of which I will undertake to sink a shaft from 150 to 200 fms. in 12 months.

After the construction of the first one they would necessarily be cheaper to make, but in order to get them adopted, I am quite willing, by way of a set-off against the first cost, to make the following proposition:—I have in my possession the grant of a most extensive and valuable tin sett, situated in one of the richest tin districts in Cornwall, and which, from the position of the lodes, should be worked by two separate engines, and, therefore, the underground workings would be divided into two mines, which we will call for the sake of distinction the north mine and the south mine. The north mine has been sunk 120 fathoms on a side lode, producing large and profitable returns of tin, but it has since been ascertained

that the main lode (which in the adjoining mine made several hundred thousand pounds profit) is only 30 fathoms distant from these workings, and all in whole ground to surface. This, besides other valuable lodes in the set, could, therefore, be readily and speedily developed by cross-cuts with almost a certainty of profitable results. In the south mine there are various lodes of equal significance, and the main one of which in the adjoining mine has proved as rich as 500*l.* per fathom.

Now, in order to introduce this excavating machinery, I am quite willing to make over these mines, free of all charge (except legal charges), to any respectable parties who might undertake to work them, on condition that they take a machine for driving and extending the cross-cuts and levels in the north mine, and one for sinking, &c., in the south mine.

As an evidence of the value I attach to this property, and the capabilities of this new excavating machinery, I am also willing, if desired by the incoming parties, to work the main lode on tribute in the north mine on the following conditions:—The company to extend the adit level on the course of the main lode, make the requisite air shafts for ventilation, provide the necessary materials, clear and draw the stuff (as broken) to surface, and supply me with a driving-machine for every 20 fathoms in depth. I will (as the water is forced) cross-cut to the lodes, extend the levels at corresponding depths for 400 fathoms in distance, make the necessary winzes to connect the levels, and work the whole lode on a tribute of 10*s.* 6*d.* in 1*l.* from the adit to 40 fathoms below the present bottom. In the south mine, I will not only drive the levels to the same extent on the main lode (after the adit level has been extended on it and the air shafts made), but will also include, on the same tribute and conditions, the sinking of the main shaft from the adit to 150 fathoms deep within 12 months. The company completing the shaft work, and bearing the water and other charges, as mentioned above.

This offer I will leave open for acceptance for 14 days from the present date. The merits of the property are fully confirmed by Capt. Thomas Martyn, Joseph Vivian, W. H. Reynolds, and James Pope, whose opinions and reports can be had on application to Mr. George Curtis at the address as under.

EDWARD S. CREASE.

17, Gracechurch-street, E.C., Aug. 23.

LOSS OF LIFE AMONGST CORNISH MINERS.

Str.—No one conversant with miners and their exposure but will deplore the loss of life consequent on deficient ventilation, and the thousand and one ills to which miners are subject. But will a Government enquiry mend the matter? Or will a systematic Government inspection be anything but obstructive to that free action necessary for the carrying out of metallic mines? You strongly advocate an enquiry, but we cannot forget the issue of other enquiries; instance the late enquiry respecting salmon, and the danger arising from our sapient legislators' interference of shutting up some of the mines, of barring out the genus *homo*, that *placens* species may flounder on undisturbed in streams again to be restored to their wonted limpidity. The great landowners in some districts in this country are pulling down houses wholesale, the nice little Fishery Bill just passed will give them a good opportunity of shutting up a few more of the mines, especially where the mineral rights are enjoyed by a different party from him who holds the soil, and a comfortable little enquiry more would be regarded as a godsend in some quarters where a restoration of the land to its pre-adamite silent solitude is regarded as the great end to be achieved.*

Can we suppose that a Government enquiry alone will be of any use, or that it will be regarded as of any use, without being immediately followed by speedy legislation, by a Government and a Legislature that aspires to the regulation of every minutiae in domestic arrangement, and in all commercial enterprise, with so scrupulous an exactness as is now so ludicrously practised in the states of Germany? What could be the aim of a Government enquiry which should not be the forerunner of legislative enactment? But is any interference on the part of the Government necessary? Might this question not safely be left in the hands of the miners themselves? Have they not in the past 10 or 20 years made as much advance as any other class of men? Some two or three years ago the ignorance of miners, and their employers too, was a favorite theme with some of the public scribblers. You may perhaps recollect, or if not your columns still show it, that I told you then, and under the signature of "A Mine Captain" told the world, that the mining classes were more highly educated than these writers had any idea of, and although my poor self and my paper received a severe castigation the following week in one of your slashing articles, the result of the recent examination of the classes of the Miner's Association proves the truth of my assertion, and that I was correct in my estimate of the position to be assumed by the mining community. No one, I presume, will have the hardihood to say this result could be achieved by one short three months' training, if they had no previous education. Whoever would endeavour to establish this must at the same time admit that their natural powers of mind are so great above others as to enable them to achieve in one short three months as much as would require any other class to attain in about twice so many years. Therefore, the detractors of the mining classes have to choose between the horns of this dilemma. But let us return from this digression to the mortality amongst miners and its causes—bad ventilation, dust and smoke, climbing to surface, hard work, and insufficient nutritious food. The first great evil—bad ventilation—much has been done of late to remedy, by carrying levels of larger area than formerly, and this, where the rock is of sufficient strength to stand without requiring timber supports, may be carried to a still greater extent, but where timber is required much cannot be done in this way. The improvements in air-machines, the daily increasing knowledge with regard to these matters, the almost general recognition of the principle that "the resistance of air increases with the square of the velocity," and the consequent rapid increase in the area of all air-pipes and courses will show that something is being done for the miner. Surprise has been expressed in some quarters that metallic mines should, as a general rule, be left to natural ventilation; we would be glad to hear what other course could be adopted that would be more effective. It must be remembered that in metallic mines, instead of there being but two shafts, and these very near each other, whence the workings are carried, as in some collieries, to the distance of three miles, the shafts are generally more in number, and these in different parts of the mine, whence communications are effected, and the situations being generally in hilly ground, from one shaft being sometimes much higher up the hill than another, atmospheric pressure alone will cause a powerful circulation. In some few cases where the ramifications are numerous, and the temperature of the earth high, artificial means may be resorted to with advantage, but it must be remembered there are difficulties in the application not present in collieries, to overcome which, whatever enquiry may be instituted, every arrangement will have to be left, as now, in the hands of the miners and their engineers. The most effective artificial ventilator—the furnace—will hardly be found applicable in the mines of Cornwall and Devon, where the cost of the fuel would be found (for a 10-feet furnace) to be an important item.

We come to the next question—dust, arising from boring, working, and hammering the rock. No doubt this is one of the most fertile sources of disease, for when the body is in a high state of perspiration, the lungs put to do extra duty, every nerve quivering, and the whole system panting from the most violent exertions, much of the dust produced must enter the lungs, where these crude and angular pieces of rock cause more destruction, and lay the foundation for more pulmonary disease, than anything else. I do not see what can remedy this save machinery for boring, by which the men would have easier work, and be enabled to keep at a greater distance from the source of annoyance, but how to apply this machinery, and what kind of machinery would answer the desired end, are questions not yet solved.

With regard to smoke, if a smokeless blasting-powder could be invented it would become a great boon.

Climbing long ladders to surface from such great depths is no doubt destructive of health and strength, but the remedy applied to the collieries appears too fruitful in fatal accidents to commend itself here, where the care of human life is always a paramount consideration. The man-engine as now adopted in some of the largest mines in these counties is better, and must extend to wherever practicable.

Insufficient nutritive food arises from a low scale of wages. But how can this be remedied? When machinery is invented to do most of the work much faster than at present that of itself will raise the scale of wages, but without this, and with the present rapid rate at which all the necessities of life are rising in price, nothing can help the miner but a corresponding rise in the price of metals, which must eventually occur, but whether enough to much improve his present position will depend on a variety of causes beyond the control of a Government commission of enquiry or inspection. A general increase of wages throughout would be the most effective means of improving the miners health and well-being; but while there are, as at present, more miners than the mines can employ, and while

the prices of metals are so low as not to cover the cost of production, it would be vain to hope for or expect it.

What can a Government inspection effect in removing any of these ills now militating against the miner? Is not the condition of all our mines made public to all the world? Have not the present mining employees sufficient skill to cope with the difficulties, and to remedy the evils around them? If not, what class of men do you recommend being employed on this commission of enquiry of inspection? Might not the same money be more usefully employed in extending the usefulness of the Miners' Association, which has already shown that the mining classes possess more information than some people gave them credit for, and is now progressing in the proper course for diffusing that information among all ranks of the mining community.—*Lostwithiel.*

WM. TREGAT.

THE GEOLOGICAL FORMATION OF THE EARTH.

Str.—It is gratifying to old Practicals, when looking through your Journal, to observe remarks such as those made by your correspondent, G. J. Gunther, on July 27 last, and to see that he has caught a glimpse of light, and given common-sense views on such interesting subjects; it is like the dawn of day. I do not now purpose referring to these able remarks in detail, but will revert to them occasionally in my observations on this all-interesting subject. I may observe that with practical men the science of Geology is truly developed; the subject is so interesting and amusing, so expanding to their minds, that their first pursuits in the study of Nature's laws ultimately become to them a source of gain, which they follow up vigorously, from a desire to benefit themselves and mankind. The man studying geology and mineralogy practically acquires a general knowledge of almost every subject, and is in a position to meet men of any country, and can entertain them in conversation with a degree of pleasure and satisfaction. It matters not as to his education; if self-taught, his words are sufficiently intelligible, and he generally states facts; whereas the classical scholar, with his high-down language, is often difficult to be understood, and his statements generally not attested facts on which you could rear a mighty structure. When commencing this study of geology, &c., one must bear in mind that it is the great source of the rise and progress of man that he is about to deal with, and from which England now stands so prominent to the surrounding nations of the earth. In the mineral resources of England lies its strength; it is, in fact, the bone and sinew of the country, the civiliser of the world. When the hardy sons of Britain first turned miners, they did not do so for the sake of unclad race, subsisting almost on the bounties of Nature. At whatever period this may have been, it caused them to become thinking men; to them colleges were unknown. Still these men had that extraordinary book of Nature to guide them, from which they gathered science, and learned how to battle with their Mother Earth; to discover her weak points, through which they penetrated her crust, and extracted her long-concealed treasures with profit. To do this they had daily to study Nature, and combat with the hardest features of the Earth, in which they laboured perseveringly until they raised England to its present proud position of glory and honour. They sowed on her land the seed of arts and freedom, which she is now sowing broadcast throughout the world. The miners were the first to introduce the arts; they daily occupied their minds to become thinking men. It taught them where and how to attack with success, to penetrate the dark abyss of Nature; no easy task in those early days, when the Earth, like mothers when their offspring were in danger, would apparently turn savagely on the persevering miners, just when her hidden treasure was in their grasp, and either deluge them with water, or destroy them by the fall of massive rocks or by the discharge of inflammable and other gases and after choke-damp. These miners had not only to learn how to attack in the softest places, but had also to ascertain her leading veins, cross-heads, and cleavages, so as to prosecute their work in the right direction with the best advantage; when suddenly (just as they supposed they had discovered the natural law of the Earth) they met with a cross-head, or cleavage, and had again to consider the best course to meet and conquer this sudden change, a difficulty not always accomplished by the same men, and when overcome a new change as suddenly takes place, with which the miner has to battle with all the resources at his command until he has succeeded. In this manner the miners are met by Nature's rocks in hundreds of varied shapes and forms, all of which they overcome by untiring skill and perseverance. After doing battle with rocks of every grade and varied from 20 years, the miner is privileged to become what is termed a "tributer," or the man that searches for the Earth's hidden treasure, and getting only a certain portion for his labour. Here, again, he enters a new field, where he has not only to battle with adamantine rocks and shield himself from her vengeance. On the surface they have to invent machinery for working the mine, dressing, smelting, and manufacturing afterwards; and well have this self-taught race—the sons of freedom—carried it out. It is to them Old England owes her wealth and glory; these were the men who carved their way in the dark ages, when neither king, queen, or lord aided them. There were no endowed schools then, yet they never retrograded. The British miner is the miner still; he sank through the iron-bound shores and mined below the ocean; he is now sought after in every clime, where he will soon sow the seeds of freedom by developing Nature's produce.

Our ancients commenced mining. They persevered and brought the ore to the surface, and evidently had to smelt it; as a proof, look at the heaps of slag or scoria on or near the mines. They also manufactured large portions of their mineral produce; and from this thinking race sprang all our artificers. These men when in the depths of the Earth had not only to watch her laws, but had to contend with and overcome Nature, and shield themselves from her vengeance. On the surface they have to invent machinery for working the mine, dressing, smelting, and manufacturing afterwards; and well have this self-taught race—the sons of freedom—carried it out. It is to them Old England owes her wealth and glory; these were the men who carved their way in the dark ages, when neither king, queen, or lord aided them. There were no endowed schools then, yet they never retrograded. The British miner is the miner still; he sank through the iron-bound shores and mined below the ocean; he is now sought after in every clime, where he will soon sow the seeds of freedom by developing Nature's produce.

It may be said other countries mined as early as the Britons. It is true, their works show it, but they did not mine with that energetic spirit the Britons did; they never broke the bonds of serfdom, they retrograded to all but extinction. It is said the Germans, Spanish, French, and Belgians mined, and that the Germans are well trained in Government schools. Have they progressed with it? I say no. A casual German manager may be found abroad, but there is not one managing a mine in England; whereas many English managers are to be found in Germany, and, in fact, in every part of the world. And I do contend that the English miner first sowed the seeds of freedom, which England is now propagating throughout the globe, and they have learnt more of Nature's laws than any other class of miners; still they receive no protection. The aristocracy, the farmer, and even the tenant-farmer, often cast a frowning look on this hardy, self-taught race. To the aristocracy I would say, beware how you externalise the reasons of the country, from which the greatest riches are raised. The back-bone of Old England; and many of you, rather than mar your pleasure or delicate taste, would crack England's back-bone in preference to giving up a few fish or game, that never add a shilling to the revenue. To the farmer I say, he has ever lived on the brains of the hard-working miner; he is only the offspring, and was evidently compelled by the miner to become what he is. The farmer is compelled to keep pace with the miner and raise his food, for which he is paid an exorbitant price, and such as would never have been obtained but for the miner's perseverance. Let them take a glance at surrounding nations, where mining has retrograded, and they will there find the farmers scarcely emerged from serfdom, and entertain no plan of progress. Again, if the aristocracy were to compare the value of land in surrounding nations with that of this country, they would then discover their real benefactors; and if by chance any of them should be too short-sighted for this, let them ascertain from the Chancellor of the Exchequer who supports the revenue. They will find they must not destroy the British miner, and retain their paltry pleasures in fish and game; neither must he be sacrificed to the agriculturalist. An agricultural country without mineral resources is not worth owning; their surplus produce would not provide them clothing and house utensils, and the farmers of such countries have the appearance of hermits rather than civilised men. Then why obstruct the miner's progress. I say—Live and let live. Let our representatives legislate freely for the advancement of the mining interest, and develop the mineral resources of the country, from which the greatest riches are raised. They should waste less time in discussing such frivolous questions as the Game and Fisheries Acts, and enter vigorously on the more important questions. It is time they should understand what was the mainstay of the nation, or their constituents should remind them, and return only those having a knowledge of what is really required by the country.

I have shown the rise and progress of the practical miner, who, I believe, are the only existing guides to a knowledge of the bare outlines of the earth's formation, and its indicating guides to mineral deposits, notwithstanding all the works that have been written and printed by well-educated men of every age on this subject. These works, I believe, tend only to baffle and confound the working Practical, who, after reading these books or the works of an evening, criticises his memory, and finds nothing to substantiate what he has read. He goes to his work the following day, determined to watch carefully, and with these remarks for his guide he continues working for months together, without a corroborative testimony bearing out the professor's statements, whilst he is hourly proving the correctness of his own views, as gathered from the book of Nature. He observes that what occurred once occurs again; such as one lode taking a certain direction is productive in ore, whilst other lodes near, and in the same stratification (with only a few degrees of difference in their bearing), are ever unproductive. Then he observes a dropper fall into the lode, and it becomes productive; a cross-course heaves a lode, and makes it productive; a second, with a few degrees variation, does not shift the lode, neither does it cause the lode to become productive. He observes what is termed good gossan on a lode, and he makes sure of finding good ore under; when he finds the lode more prolific in certain substances, he is sure it will shortly change to a more valuable mineral. He also watches the acids that ooze from the lode and surrounding rocks, if metallic; if not, he has not much to cheer him. He also wishes and watches for its proximity to all granitic and elvane rocks that may thwart or intersect his lode, well knowing that much depends on such intersection, and how it meets the lode. He also knows that at the junction of many lodes in a mineral-bearing rock it is all but certain that some of them will prove productive about the intersections, and one or two of these lodes generally carry the bulk of the ore. He knows from the appearance of lodes in mines he is accustomed to if in the shaft, end, or whatever it may be, the lode is likely to change for the better. Watchful men know even by cutting water in different levels when they are coming near a shoot of ore, and which way it is dipping; hence it is that one man gets more money on tribute than another. It is better to take a poor looking pitch, with plenty of ground in it, in the line of a good shoot of ore, than to take a good looking pitch out of the line of ore, unless something is seen that will intersect the lode, and known to be generally productive; if lodes make bunches of ore in these places, they are not often extensive. Now, a well-educated man may write books until the advent of doomsday, or make experiments for an equally long period, without discovering what the practical man knows. All his study and writing amount to nothing, further than to confuse the young student, and set him at variance with the man of practice. Theoretical writers are continually clashing and creating confusion, like the tongues of Babel, each asserting his own views as to how and which rocks were first formed. It is of little importance to the miner, smelter, or consumer as to these first formations, or what they were before they became rock. All they require to know is what layers of the earth are mineral-bearing, and what are not, and the best and surest guides to find it.

The plutonists, or fire worshippers, appear to be the mania of the day. These theorists endeavour to make us believe that every mountain is but the remains of what was once volcanic fire. What can be more absurd? What rocks have we in England presenting a single indication of their having ever been volcanic? Is there a thinking Practical in all the country so narrow-minded as to believe that a single hill was ever a melted mass? I think not. Were it so, the inverted cone or crater would be found in every mountain. Hundreds of these hills have been driven from through, and nothing volcanic found in them. In Cornwall levels are driven almost from sea to sea, and nothing of the kind is found. Carn Brea Hill is driven through, and no Cornish miner believes, from anything he can see at the depth of that level, that anything of a volcanic nature ever took place there. The whole of these rocks are crystalline; one portion is hard to melt, whilst the other melts freely, which proves, as clear as the sun at noon-day, there never was heat sufficient to melt the free portion, or it could not be there now. Every substance known to man is to be found in rocks (many of them inflammable); then, I

ask, how were they not consumed during the reign of fire? The plutonic worshippers may say they have grown since; if so, they are ever growing; and never was there sufficient heat in the earth's crust to melt any portion of them. Sulphur if subjected to heat would burn of itself and evaporate. I have known many men (after reading theoretical works) go into a mine where chance has thrown in their way a cinder-like stone, which they once catch the infection propounded by the theorist, and pronounce it a volcanic formation.—*Woolacombe, Aug. 20.*

[To be continued in next week's Mining Journal.]

THE CORNISH SYSTEM OF WORKING MINES.

Str.—The remarks of Mr. Evan Hopkins, in last week's Journal, on the system of mining adopted in Cornwall, are unquestionably severe. That there is some truth in what he has written will not be denied in this letter; but how to supply a remedy suitable to general application is a question of great importance, and I believe of difficult solution. It is easier in the absence of a practical acquaintance with the peculiar requirements of a system to condemn it than to substitute another and a better one. Two or three questions naturally suggest themselves in consideration of this subject—Are the mines of Cornwall analogous in all respects to the iron and coal mines of the North of England and Wales; are the deposits, whether of ores or of coals, characterised by the same general features in all cases alike; do the metallic veins of Cornwall, yielding their respective products, whether of copper, lead, or tin, continue with unvarying regularity in depth and extent conformably to primary indications? Is it not the case in a variety of instances that lodes suddenly change their underlie, from some cause unknown and unsuspected, at the shallower depths; and still more frequently are they not displaced by cross-courses, and removed to considerable distances from their original position and bearing, showing clearly that until some reasonable depth is attained, and the whole of the agencies and influences by which lodes are affected are correctly ascertained, it is injudicious and unsafe in Cornish mining to incur the expense of sinking a leading shaft, corresponding to those used in the iron and coal mines? And even when this is accomplished, and the various improvements adopted—recommended by Mr. Hopkins as necessary—to raise Cornish mining to a level with other districts, will he then undertake to affirm that the practical working of that system will be productive of similar results in both cases? If so, I will thank him, in my individual capacity as a Cornish mine agent, for any information on this subject his great experience and judgment qualify him to impart; and, at the same time, I hope the mine agents of this county will enter into the discussion of this question with becoming interest, and exhibit that candour and intelligence which shall give a practical refutation to the charge contained in Mr. Hopkins's letter,—that the mine agents of Cornwall are too strongly prepossessed in favour of their own system to admit of any change in it, however advantageous and beneficial it may be found to operate in other districts.

ROBERT KNAPP.

"THE CORNISH SYSTEM OF WORKING MINES."

MR. EVAN HOPKINS ON THE WICKLOW MINES.

Str.—This able and diligent correspondent of the Journal is giving his old friend, Nicholas Ennor, an excellent piece of advice, by recommending him to inspect the sulphur mines of Wicklow before he makes another visit to Spain. If Mr. Ennor will act upon this friendly advice, he will find Cornish managers and Cornish agents in every mine of the county Wicklow, and "one and all" ready and willing to give him a hearty welcome as an honest old miner, though without that polish which so often covers a substance rotten at the core. He will then find, what his friend, Mr. Hopkins, does not appear yet to know, that the Wicklow sulphur is not so much "enclosed"—adopting Mr. Hopkins's nice distinction—as actually "embedded" in the clay-slate of the lower Silurian system, as if of contemporaneous formation. I have read with great interest, and, I hope, with benefit to myself, Mr. Hopkins's several publications, and many of his able letters in the *Mining Journal*, on geological facts and theories, and have thereby acquired a high regard for the author's comprehensive views in geology. But this great comprehensiveness, I fear, unfits him for a miner. Geologists of Mr. Hopkins's class are as apt to follow the intricacies and caprices of lodes as a Brunel or a Stephenson would have been qualified to follow the calling of watch manufacturing, although their talents as engineers are of world-wide fame. I am led to these remarks by Mr. Hopkins's opinion, expressed in his "Cornish System of Working Mines," and published in last week's Journal, wherein he says,—"If deep poor mines are to be further prosecuted, I would recommend the shareholders and lords of such mines to place them in charge of the North countrymen, to work them according to their method. The pumping machinery and the dressing may be left in charge of Cornishmen. If this plan be adopted, many old mines now wrought at ruinous losses may be rendered highly remunerative, and permanently beneficial to the country." Will your correspondent name any place in the world, and he has seen a great part of it, where such poor ores and small intricate lodes as are in Cornwall are worked to greater advantage than in that county, unless managed by Cornishmen? Again, he says,—"Cornishmen, unfortunately, take their own system as a standard of perfection, and are prejudiced to everything but what is adopted in their own county." I wonder that Cornish lords and shareholders are so blind to their own interest as not to have discovered this fact ere they were told of it by Mr. Hopkins. But, perhaps, he will tell us where his opinions or his advice on Cornish mines have been successful, and then your readers will arrive at a correct appreciation of Mr. Hopkins's system of management. It would be as easy for him to manage a few mines in Cornwall as it is for him to manage his first experimental mine in this "green Isle," by directing the underground work per telegrams. I cannot help saying that his report on the appearance and progress of that mine, and published in the *Irish Times* of July 2, does not fill me with the same degree of respect for Mr. Hopkins's qualifications for a mining captain as I have for his general knowledge of geology. His comparison of the Cornish system of working mines with the North countrymen's method of working iron ore, ironstone, and collieries, is singularly ill-judged from a gentleman of so much experience in mining as Mr. Hopkins ought to have picked up in his geological rambles through the world. I should hope there is no mine agent, either in or out of Cornwall, who cannot see the necessary difference in the system required for working iron ore and ironstone, quarries, and collieries, the extent of which is calculated by the acre, and the method necessary to be pursued in the working of small lodes, the ore-bearing part of which is mostly measured by inches, and in the richest mines only by feet. His criticism on the recklessness with which he alleges Cornishmen sacrifice the health of the labouring miners needs scarcely to be commented upon, as few people interested in mining are ignorant of the credit due to Cornishmen and Cornish enterprise for the introduction of the man-engine, as yet the earliest means for ascent and descent, combined with perfect safety and expedition. A few exceptions by greedy or needy adventurers certainly do not constitute the "Cornish system of working mines."

In Mr. Hopkins's remarks on Mr. Ennor's visit to Spain he observes,—"The Cornish system of working is as inadmissible in sulphur mines as it is in our iron and coal works." This opinion I have above disposed of. But that Cornishmen are generally considered capable of adapting the best system to the work entrusted to them is proved by the fact that all the rich sulphur mines of Wicklow, without exception, are managed by Cornishmen. They (the mines) have been grown and are about to be rich by some of the Cornishmen's system; so much so that new mines are springing up all around them, and old ones are revived by new capital. But Mr. Hopkins had better come and judge for himself. With his keen perception, I am sure he will find something or other he has not met with before; for I cannot remember or hear that he has ever been seen underground in any of the Wicklow sulphur mines.

WICKLOW MINER.

Ovoca, Aug. 19.

MINING IN SHROPSHIRE—THE CENTRAL SNAILBEACH.

Str.—Much has lately been said about mines and mining in Shropshire, especially since the Central Snailbeach sett has been announced, which has been frequently looked at as a worthless adventure by parties who are unacquainted with the character of the district, but it is not of such insignificance when sufficient capital is brought to bear upon it, as is now proposed by the adventurers, who are about incorporating themselves as a joint-stock company, with limited liability. Doubts are also entertained by some of the venturers as to whether the Snailbeach main lode runs through this sett. I have spent a great part of my life in mining, and principally led mining at the Snailbeach Mines, and having been always fond of observing the various runs of ore, their characteristics, dips, and bearings, I feel myself qualified to give a decided opinion upon the Central Snailbeach sett, which is causing so much enquiry in Shropshire.

I am now resident manager of the Brethel Colliery, eight miles north-west of Snailbeach, where, under my superintendence, the third pit is being sunk, and plant is laid for the requisite operations. Having been consulted by an intending shareholder, I have more than once very recently visited the levels of the Central Snailbeach, and have made my own observations. I now, without any hesitation, fearlessly assert that the "strong vein," shown on the lithographic plan, is none other than the main lode of the Snailbeach Mine, and the following remarks will bear me out:—1. There is an adit level called the Water-Wheel level, belonging to the Snailbeach Mine, that is driven from the north, east of south, a distance exceeding 1300 yards before it cuts the main lode at this depth, and for 25 yards below dipping north. Back north in the same level 75 fathoms there is a diagonal cross-cut driven in a south-westerly direction for about 200 yards, and no vein cut until it arrives at the main lode, still dipping north, picking west, leading to the Central sett. The latter is at least 300 yards west of the Snailbeach engine-shaft, and only about 360 yards from the Central Snailbeach eastern boundary, its bearing being that of the strong vein, delineated in the Crow's Nest level of the Central Snailbeach.—2. The Crow's Nest adit level is driven to the distance of 400 yards (having its commencement quite 400 yards south of the outlet of the Water-Wheel level, in the Snailbeach sett) without cutting anything worthy of note until we arrive at its strong vein, shown on the lithographic plan, with a northern underlie still picking west, proving beyond doubt that it is the Snailbeach main lode.—3. I now return in an easterly direction towards and within 180 yards of the Snailbeach engine-shaft, at which place there is an adit level driven in a southerly direction, 40 yards before it cuts the main lode, where its underlie is north. At the time this was cut no notice was taken of it, not even until the western drivages of the Snailbeach Mine demonstrated the fact.

I am told by some of the present workmen that in the eastern ends of the Snailbeach workings there exist valuable pipes of ore, in more or less continuance, and are being worked in a westerly direction for about 1100 yards; and from information I have gathered from acquaintances now working in the Snailbeach Mine, Gwilliam breast is at the present time worth 5 tons per *fm.*, with every appearance of it shortly improving to 10 tons per fathom, and this only 360 yards distant from the Central Snailbeach southern eastern boundary. I used to work principally in the eastern drivages of the Snailbeach Mine, and cut several pipes of ore, from one of which I and my company raised 319 tons 19 cwt. in one quarter. When so employed a friend of mine, Richard Davies (in the same capacity as myself, was raising some 250 tons of ore per quarter from workings in the westerly end, and not more than 400 yards from the eastern boundary of the Central sett. The adage was that this ore was under Old Richard Philpot's arm-chair.

I forgot to mention at an earlier period the great advantages possessed by the Central Snailbeach sett over many others, in having two valuable, powerful, and permanent streams of water, which can be made applicable for all the mining operations. To remind the public of the immense intrinsic value of the Snailbeach ores would be superfluous. When visiting this sett I was struck with the excellence of the clay and ad-

minable stone quarry on the property, which is but two miles from the Ministry Railway Station. In conclusion, I can with confidence assert that the Central Snailbeach sett will with judicious working produce second to none in the county. EDW. DAVIES.
The Brischell Colliery, near Shrewsbury, Aug. 20.

THE BEARING OF LEAD LODES.

SIR,—In the Journal of last week there are two reports on the Carmarthen United Mine: one from Mr. Evan Hopkins, and the other from Mr. Robt. Sanders. Mr. Hopkins states in his report,—"That the north-west bend in the lode going north is favourable for the production of ore; it is the most productive bearing." And, again, he states,—"Had the underlie been towards the valley, instead of into the hill, the lode south of the shaft would have been more productive." Also, speaking of the counter lode, he says,—"The underlie is unfavourable for the aggregation of mineral going south into the hill." And goes on to say,—"If the counter have a good footwall and keeps the same bearing, I expect masses of ore will be found in 10 or 15 fms." My object is not to criticise Mr. Hopkins's report, but to enquire of him the bearing and underlie of the most productive lead lodes in North and South Wales? I find from observation that the most productive lead lodes in Devon and Cornwall are from 5° to 15° west of south and east of north; and should they bear 10° to the east of south they are unproductive, and generally become mixed with the rock they pass through, or, perhaps, a dead flookan, without any mixture of quartz or fluor-spar, or anything congenial to the formation of lead. I think in Devon and Cornwall will be found a rule without an exception. And I should feel much obliged to Mr. Hopkins if he will inform me the bearing of the most productive lead mines in Wales.—Redruth, Aug. 20. H. JAMES.

AURIFEROUS STEEL.

SIR,—In last week's Journal I find a revival of the proposition for improving the quality of iron and steel by employing a small quantity of gold as an alloy; and, from the prominence given to the subject, it would appear that extraordinary results are anticipated from the development of the invention. Yet, passing over the apparent anomaly mentioned, that adding gold by the pound produces no beneficial effect, whilst adding it by the dw. is to be highly beneficial, I cannot understand how such an infinitesimal proportion of any metal in the steel could produce any palpable effect, for I find that the proportions in every 100 parts are something like these:—Iron, 99.999993; gold, or platinum, 0.000007. Now, I would ask Mr. Longmaid whether he is prepared to state, as a chemist and metallurgist, that such an alloy can be artificially produced? In my opinion, it would be as difficult to obtain a perfect alloy in these proportions as it would to obtain a perfect mixture of a single drop of olive oil and a hoghead of distilled water. In each case the greatest consolation of the manipulator (after having lost sight of the foreign substance) would be to know that it had been added to the iron or water, as the case might be, but to ensure anything approaching uniformity in the mass would, in my opinion, be impossible.

Mr. Longmaid's mode of obtaining an intimate connection between the two metals is, doubtless, as good as any that could be suggested, but even that in practice will be found ineffectual—he could not produce a single ton of uniform auriferous quality. But this is not all. Even assuming that the best known iron and steel contains gold in the proportions fixed upon by Mr. Longmaid, can it be believed that it is the gold which affects the quality of the steel? or rather will it not be found that its existence in the finished metal is attributable to the existence of inappreciable quantities of the precious metal in the ore, and that the steel would be just as good if no gold were there?—Tipton, Aug. 22. J. WEBB.

PEAT AS AN IRON-MAKING FUEL.

SIR,—The question of using peat as a fuel for the manufacture of iron is one of such vital importance in Ireland, that it is really marvellous that so much apathy should exist respecting it, more especially as several really promising inventions have been brought before the public to accomplish the desired object. Few, perhaps, are more novel than that of Mr. W. H. Buckland, of South Wales, which was referred to in the *Mining Journal* some few months since. I understand that negotiations are now pending with several influential gentlemen in Ireland; and feeling confident that peat, if properly prepared, could be advantageously employed for the manufacture of iron, I should be glad to learn the price per ton at which it is proposed to supply it, and whether a few tons could now be had for experimenting with.

While writing, I may mention my reason for concluding that peat could be advantageously used for the purpose mentioned. I find that every attempt to treat coke irons to make them equal to charcoal irons has failed, and that many processes for making steel have succeeded with charcoal iron, but proved useless with coke iron. But it seems to me that peat charcoal and wood charcoal are so nearly similar, that if we could have peat iron at a moderate price I cannot see why we should not at least be rendered independent of foreign countries for our supply of steel-iron, and the development of the peat-iron manufacture would likewise have the effect of greatly improving the condition of the labouring population of Ireland.—Cork, Aug. 22. J. B.

TREATMENT OF POOR COPPER ORES.—The subject of treating poor copper ores is attracting quite as much attention in South Australia as in this country, and it appears that the colonists are not altogether inclined to permit an Englishman to have the honour of introducing the process by which ores now lying valueless shall be brought into a marketable form. Mr. R. V. Rodda, of the Burra Burra Mines, has discovered a process promising results no less important than those contemplated by Mr. Henderson. Mr. Rodda does not claim to deal with ores so low as 1½ per cent., which is Mr. Henderson's minimum, but 3 per cent. ores are certainly not below his treatment; while it possesses the advantage over Mr. Henderson's method that it is applicable to high-class ores also, and it is likely to effect a considerable saving in their transportation into copper. Mr. F. Sinnett (the inventor's agent), in a letter addressed to the *South Australian Register*, says—"The use of the Yatala Smelting Works has been obtained, in order that Mr. R. V. Rodda's process may be tested on a satisfactory scale, and the requisite works are now in progress there. In a few weeks' time I hope you will be able to judge for yourself that it is not necessary to go from home to find a valuable illustration of the fact, that the inventions of one man are often very harmoniously timed with the discoveries of another." With reference to the extension of smelting operations in the colony, it is affirmed by a competent authority upon fire-clay, that the brick material at Wallaroo is equal in quality to any found in England or elsewhere.

STEAM ON COMMON ROADS.—The applicability of steam to locomotion on common roads has been long and universally admitted, but until a recent parliamentary enactment extended some protection to common road locomotives it was extremely difficult to succeed, even where no direct opposition was offered. Henceforth there will be nothing to prevent the profitable development of the traction-engine system, and the benefit derivable by the general public will be quite as great as by the shareholders in the company. The invention of the late Mr. James Boydell is well known to our readers, and the fact that his engines have given the greatest satisfaction in the colonies, in Russia, and in all other places where they have been tried, is likewise familiar to them; they will, consequently, be glad to learn that, with a view to secure to the widow and family of the inventor some return for his indefatigable labours, and the large amount of expense which he incurred in perfecting his discovery, a company has been formed with a capital of 30,000l., in 10l. shares, and upon the limited liability principle, for bringing Boydell's Endless Railway Traction Engine into general use. The great advantage which Boydell's machine possesses over all its rivals arises from the fact of its carrying its own railway, and a railway, too, in the ordinary acceptance of the word. The consequence is that whilst other traction-engines are only efficient upon an ordinary road, so good that they could be travelled by bullock-wagons, Boydell's engine is equally useful in the construction thereof sloping or level. To a great extent it will give mines situated in districts unapproachable by other means the facilities of those situated near the shipping port, and no doubt its use would add materially to the profits derivable from the working of mines in such localities as the interior of Spain or the northern districts of South Australia. For every other purpose the engine would be quite as efficient for the transport of mineral produce; and as soon as sufficient exertions have been used to secure the adoption of the machine, there can be no doubt that the profit to the shareholders will be enormous.

GENERATING HEAT IN BOILERS AND FURNACES.—An invention has recently been patented by the Hon. W. E. Fitzmaurice, of Hyde-park Gate, which consists, firstly, in burning carbonaceous matter, or fuel, in oxygen gas, or in oxygen gas diluted with atmospheric air, and in the direct application of the heat thereof generated to boilers or furnaces, or in the application of the gaseous products of this burning of carbonaceous matter as fuel. Secondly, it consists in mixing water or steam with oxygen gas, or with atmospheric air, or with these combined, and in passing such mixture through heated or ignited carbonaceous matter, and applying the gaseous products obtained therefrom as fuel to boilers or furnaces by any convenient mode of application.

TENBRINCK'S FURNACES.—The specification of this patent, just filed as a communication to Mr. Henry, the patent agent, Fleet-street, relates to furnaces constructed of metal, and consists chiefly in combining in the construction thereof sloping or self-sustaining fire-bars, a hopper plate without perforations extending to the fire-bars, a valve for admitting air just over the layer of fuel lying on this hopper plate, and an inclined water space, so arranged and placed that the flames and hot gases are forced to pass round one end of it, and are brought into contact with the fresh fuel issuing from the hopper, which they thus subject to a commencement of distillation.

THAMES TUNNEL COMPANY.—Receipts for the week ending August 17, 537. 11s. 8d.; number of passengers, 12,560.

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending August 18 were 11,890. 10s. 9d.

HOLLOWAY'S OINTMENT AND PILLS—HIDDEN AILMENTS.—How many persons suffer from disease, for which, through bashfulness, no relief is sought till their strength of constitution is sapped. The hemialia, deranged digestion, and dull pain in the back and loins, attendant on these maladies, may be safely and permanently cured by rubbing in Holloway's ointment, and regulating the system with his pills. All diseases affecting the lowest bowels, which are so troublesome and so weakening, may thus be cured without consultation and without vexing explanations. The swellings soon subside, and cases succeed. Holloway's universally esteemed ointment and pills are equally suitable to both sexes, at all ages, and in any climate. Full instructions for their use accompany each packet of these medicaments.

Meetings of Mining Companies.

NORTH DOWNS MINING COMPANY.

A general meeting of shareholders was held at the account-house of the mine, on Thursday, Aug. 16.—Mr. RICHARD HALLETT in the chair. Upwards of forty shareholders were present, including about a dozen from the neighbourhood of Liskeard.

Mr. W. J. DUNSFORD (the secretary) having read the notice convening the meeting, the accounts and minutes of the last meeting were submitted for confirmation, and signed by the Chairman. He next read the statement of accounts, as follows:—

Balance from last account	£ 136 14 3
Copper ore sold, May 30, 240 t. 3 q.	1831 2 5
Ditto, July 27, 377 t. 19 c. 2 q.	2130 3 9
Old materials sold	17 12 0=£4175 12 5
Labour cost, March	£498 0 8
Ditto, April	431 4 0
Ditto, May	506 9 7
Ditto, June	488 18 9=£1904 13 0
Merchants' bills, March	153 5 4
Ditto, April	147 3 9
Ditto, May	182 18 0
Ditto, June	276 17 0=760 4 1
Royalty on ores sold	201 1 3
Interest and discount	16 12 6=2881 10 10
Leaving credit balance	£1294 1 7

The following report of the mine was then read by Mr. F. PAYTON, the manager:—

Aug. 15.—Since the last meeting of the shareholders we have completed King's engine-shaft to the 60 fm. level, done all necessary work in connection therewith, and are now pushing the shaft down to the 70 by a full pair of men, at 25l. per fathom; the lode in this shaft is 2 feet wide, producing stones of ore, and it is at present, and has been, in the cross-course for some considerable time past, which accounts for its non-productiveness. The 60 is driven east of King's shaft 3 fathoms; the lode is large, and presenting a better appearance than it did at the same point in the level above. If we may calculate the dip of the ore from the 50, we have still some distance to drive to reach it, but judging, however, from the appearance of the ground to-day, we are of opinion that we shall shortly have a decided change for the better. The 60 is extended also west of the shaft about 3 fathoms; this end is presenting such an appearance as induces us to expect a course of ore daily. The 50 is driven west of shaft 34 fms.; this end has been, and is still, opening up some good tribute ground—present end worth about 20l. per fm. We may observe that we have no level over this end. The 40 is extended east of the shaft about 30 fathoms; this end is producing good stones of ore; and, judging from the ground we have driven through in this level, we are of opinion that we are skimming over a good lode of ore, as a pool of which we may mention that we have a good lode of ore in the rise going up from the 50, which is worth fully 25l. per fathom. We attempted to sink winzes below the 50, both east and west of the shaft, but were prevented from doing so in consequence of the water, the 60 ends not being extended far enough to drain the ground. These winzes were being sunk in good courses of ore, but we are not at present raising ore from them we deem it right not to include their value in this report. The 50 is driven east of the shaft 36 fathoms through a good course of ore; the last 20 fathoms worth on an average not less than 60l. per fathom, present end worth 70l. per fm. We have communicated a winze from the 40 to the 50, which has passed through a good course of ore, and which has well ventilated this part of the mine. We have also sunk a winze in advance of the end through a good lode of ore. Since our last meeting we have driven over a lode of ore east of Bennett's shaft, in the 50, about 10 fathoms, worth fully 10l. per fathom. This may be regarded as a very important feature, as the lode has come under the slide, and at a distance from the western end of upwards of 100 fathoms. Our object is now to push on with all speed the 50, so as to enable us to sink Bennett's shaft, and seeing this ore is making back through it, we may reasonably expect that it will fully pay for sinking. We see no reason, as we before mentioned, why the coming in of the ore under the slide in the eastern part of the mine will not have the same effect as in the western part, and if so I scarcely need name the results, the samplings being the best proof. We are putting up a rise in the back of the 40 at this point to communicate with a winze sunk below the 30, which will thoroughly ventilate this part of the mine, and also open up good tribute ground. We are cross-cutting in the 20 to intersect North Trekerrier and other lodes, which are now so very productive to the east of us. These lodes run through the entire length of our set, all in whole ground, and as our cross-cut is in a beautiful channel of kilaes we attach great importance to this point of operations. In conclusion, we would remark that our stopes and pitches are looking extremely well, one stope being worth 100l. per fathom. You will perceive from the statement of accounts, and the steady increase of our samplings, that our position is greatly changed, and although we have no doubt of our next sampling again exceeding any former one, yet we do not hesitate to say that we have been, and are at the present time, discovering twice as much ore as we are taking away.—F. PAYTON, J. GREENFELL, T. PEACHE.

The CHAIRMAN having submitted the accounts and report to the meeting, moved that they should be adopted, and entered in the cost-book.—Mr. EDWIN COCK (of Redruth) having seconded the resolution, it was carried unanimously.

The CHAIRMAN said that it was his pleasing duty to propose a dividend of 2s. 6d. per share, amounting to 750l., leaving a credit balance of 544l. 1s. 7d. to be carried to next account. The time had been when he and his fellow-committeemen had had to pledge their own credit to procure the funds to meet the cost-sheet, and they had done so willingly, for they had the most complete confidence in the mine, and in the management. All that was now past, and henceforth they would have no occasion to go to their bankers, for there was not a shadow of doubt that at their next meeting their accounts would show as good, probably a much better, balance. They could calculate at least upon a like dividend of 2s. 6d. per share, with a surplus, he hoped, of 700l. to add to their present balance. If, indeed, between this and the next meeting the standard should rise, they would be able to award still more largely to their balance, if they would be then content with only dividing 2s. 6d. per share.

Mr. DUNSFORD having referred to the cost and probable returns between this and the next meeting, showed that, with an improved standard, the next dividend might be 5s. per share, still leaving an increased balance.

The CHAIRMAN said it was proposed that the dividend should be payable on Sept. 1, as the ore bills came in on the 28th.

Mr. I. C. ISAAC (of Liskeard) said he felt quite satisfied with the statement of accounts and the proposed dividend. The report was also most satisfactory, and he felt they were quite justified in making the dividend of 2s. 6d. per share; he, therefore, had great pleasure in seconding it.

The CHAIRMAN put the resolution that a dividend of 2s. 6d. per share be declared, payable on September 1 next, which was unanimously agreed to.

Mr. RICHARD HAWKE (of Liskeard) proposed a vote of thanks to the Chairman, which was seconded by Mr. FRANCIS PAYTON, and carried unanimously.

The CHAIRMAN having returned thanks,

Mr. I. C. ISAAC begged to be permitted, before they separated, to propose a resolution which, although often adjourned until after dinner, seemed to him to be really a matter of business. When they looked about them, and saw this prosperous mine, with an excellent plant and machinery, and every appliance to develop its resources, he would say, "What a cause it is!" The answer must be—the skill of the agents; and, therefore, he asked all the shareholders to join cordially in returning their best thanks to Mr. Pryor and the agents, by whose exertions and skill this property had been made so valuable.—Mr. GLENN (of Liskeard), on behalf of himself and numerous friends who had worked together, had great pleasure in seconding the resolution. Some said that Mr. Pryor was a lucky man; but they looked to results, and if these were satisfactory luck was as good as skill. Which ever Mr. Pryor's success was due to, he well deserved the thanks of the North Downs shareholders.

The resolution of a vote of thanks to Mr. Pryor and the agents having been put, was carried unanimously.

Mr. PAYTON said he was particularly gratified in having a vote of thanks proposed and carried by such friends, who held such a large interest in the mine. He had to thank them not only for the compliment paid him by the present vote of thanks, but also for the confidence which they had reposed in him in times past. He hoped always to have the same confidence from them, which on his part he should always do his best to deserve. If they cut the throat of ore they now had in the 50 in their next level (the 60), North Downs would be one of the best copper mines in the western division of the county of Cornwall.

Mr. ISAAC said he had one more resolution to propose, and that was a vote of thanks to their secretary, Mr. Dunsford. Of his experience of London management and London offices, he could say that, of any with which he was acquainted, he knew of none equal to Mr. Dunsford's, or on which he had so much confidence. He was particularly struck with the clearness with which all the books and accounts were kept, which in his opinion was a point of the utmost importance. He felt the shareholders were greatly indebted to Mr. Dunsford.—Mr. R. HAWKE seconded the resolution, which was carried unanimously.

Mr. DUNSFORD, in returning thanks, said he had always endeavoured to deserve the confidence of the shareholders in mines in his office, and hoped he should continue to have the same confidence from the North Downs shareholders as was expressed by the resolution just passed. If he failed to do so, it would certainly not be from the want of any endeavours on his part. He had worked hard for this mine, and taken the burden upon his position and prospects were very different from what they were now. He had been in and out at times, which in his position was necessarily the case, but he could truly say that he had always been in the fight in North Downs. It was satisfactory to him that his exertions had not been without some result, and that he had the pleasure of meeting them there that day, on the declaration of their first dividend—the beginning, he hoped, of a long course of prosperity. He again returned them his sincere thanks.

The meeting then adjourned to dinner, where they were joined by several guests, including among others, Mr. Thomas Field (of London), Mr. Wm. Page (of London), and Mr. Edward Cooke.

NORTH DOLCOATH MINING COMPANY.

An ordinary general meeting of shareholders was held at the company's offices, Adam's-court, Old Broad-street, on Wednesday.—Mr. W. C. VIVIAN in the chair.

The notice convening the meeting having been read, the minutes of the last were read and confirmed. The accounts showed:—

Balance last audit	£228 15 7
Mine cost, Feb. to June	449 16 11
Merchants' bills	138 7 9
Club account	1 19 9
Incidental expenses	0 5 0=£819 5 0
Call	£750 0 0
Income tax deducted from royalty on ores sold	1 11 5=751 11 5
Leaving debit balance	£ 67 13 7

The report of the agents was read, as follows:—

Aug. 20.—The engine-shaft is now down 35 fms. below the adit, the lode is 3½ ft. wide, kindly in appearance, and producing occasional stones of copper ore of very good quality; the ends have been set to drive east and west of the same, by six men and three boys, as follows:—east end, at 2l. 15s. per fathom; west end, at 3l. 5s. per fathom. The lode in the 20 fm. level, east end of cross-course about 7 fms., has very much improved within the last few days, it is now about 1½ ft. wide, more sparry than heretofore, producing splendid stones of copper ore.—J. VIVIAN, J. PAUL.

The CHAIRMAN thought the shareholders could but consider the report just read as satisfactory. Those who attended the last meeting would probably recollect it was thought there would be a favourable change in the ground when they got below the black gossan, which contained silver. They had passed through about 20 fathoms of black gossan, which was expected would be the case, below where they had found copper. The character of the ground was gradually improving, the lode being composed of those descriptions of minerals which were found generally associated with copper—indeed, it

was already producing good stones of copper ore, more particularly in the 20 fm. level east. In the shaft also there were good stones of copper ore; the lode generally was improving very much in character, fully justifying the expectation that the results some time since anticipated would, upon a further moderate outlay, be realised. In the meantime, therefore, funds must be provided for carrying on the works. From the accounts just submitted it would be seen that the existing debit balance amounted to only 67l., which, at the end of five months' working, was less than the debit balance at last meeting.

Mr. PALMER thought as they were looking for an early improvement that the next meeting should be held in about three months.

The CHAIRMAN said their expenses could not be lessened, inasmuch as they were about to drive two more levels. For some time the monthly cost had been about 110l., but he calculated that in future it would be increased to between 140l. and 150l.

Mr. GREGORY considered that such a call should be made as would enable the works to be prosecuted with vigour. It was to be hoped some satisfactory result would be realised before the next meeting, which he considered they were justified in expecting, seeing they were making very good progress in sinking, at the rate of more than 2 fms. per month.—The CHAIRMAN said that the works were conducted with economy, but at the same time they were prosecuted with vigour.

Mr. GREGORY considered that economy had been carried to the utmost limit consistent with vigorous development.

The report having been received and adopted, and the accounts passed and allowed, a call of 2s. per share was made, with the understanding that the next meeting be held at the expiration of three months.

The committee of management having been re-elected, a vote of thanks to the Chairman was passed, when the proceedings terminated.

NEW WHEEL VADDON.

A meeting of shareholders was held in Penzance, on Saturday.—Mr. WESTON in the chair, when the following report was read:—

Aug. 15.—This sett, which is tolerably extensive, is situated in the parish of Perran-arthoe, and is traversed by the lodes of Tolvadden, Charlotte United, and Wheel Trebarvah Mines. An adit level, nearly 600 fathoms long, has been brought in from the sea on the course of a lode running parallel with and going down close by the north side of an elvan course. It appears to have a direction approaching 15° or 16° north of east, and in places has yielded good work for tin. On the south side of the elvan there is another lode, on which comparatively little has been done in this level; but at one place, near the intersection of a lode, I find extensive workings in the backs. A shaft, known as Mildram's, has been sunk to the depth of 20 fathoms, and a level in the 12, and another in the 20, extended on this lode a few fathoms, in each of which deposits of tin have been met with. This shaft should continue to the adit—a depth of 43 fathoms from surface—which will secure ventilation, and test the character of the lode. In driving the adit level four or five lodes have been intersected, which are unquestionably those of Charlotte, Trebarvah, and Tolvadden Mines. These present a favourable appearance, and it is probable that deposits of ore will be found in them around the large elvan course, and they should be opened upon at once.—W. H. REYNOLDS.

A thorough investigation of the accounts was made by Messrs. Weston, Thornthwaite, Stone, Phillips, and others, but the proceedings were more those of a committee than of a general meeting. The resolutions of the last meeting were read and confirmed.

There was a conversation about meetings and adjourned meetings.—Mr. STONE thought a body constituted under the Limited Liability Act was a body corporate, and it had been decided, and again, that a corporation could not hold adjourned meetings. They might call them what they liked, but adjourned meetings without fresh notices were not legal.

The CHAIRMAN, in answer to Mr. Thornthwaite, said the committee's fees were 20l. for half a year, the arrears on last call were 139l. 11s., and on the five calls 211l. 5s. 9d.; the relinquished shares were valued at 39l. 12s., and the forfeited shares at 185l. 18s. 6d. There was now a balance in the bank of 177. 3s.

For the due prosecution of the mine, Mr. WESTON moved, and Mr. THORNTHWAITE seconded, that a call of 3s. per share be made, payable on Sept. 6, which was carried unanimously.

GREAT WHEEL ALFRED MINING COMPANY.

A special general meeting of shareholders was held at the London Tavern, on Tuesday.—Dr. A. BEATTIE in the chair.

Mr. D. COHEN (the secretary) having read the notice convening the meeting,

The CHAIRMAN said it would be recollected it was determined by a large majority upon the last occasion they met, at a special general meeting, should be convened for the purpose of taking into consideration the question as to whether or not the mine should be stopped; and, therefore, the present meeting had been convened. The company's solicitor had been consulted upon the matter, who had drawn out the proper resolutions. He might inform the shareholders that the present being a special meeting, no other business could be transacted except that for which the meeting had been convened. Several protests had been handed in, but he need not inform those who had protested, that if the majority determined upon stopping the mine their protests would necessarily fall to the ground. He concluded by moving the first resolution, to the effect that it was expedient to discontinue the further prosecution of the mine.

Mr. COHEN, having moved the original resolution for stopping the mine, seconded the proposition now proposed from the chair.

Mr. NICHOLLS said that as he was not permitted to speak at the last general meeting—Mr. COPE said Mr. NICHOLLS was not a shareholder at the last meeting, and, therefore, he was not entitled to speak.

Mr. NICHOLLS said he was a shareholder now, and he had handed in to the Chairman a protest, signed by a shareholder, who desired it to be read at this meeting. He would, in the first place, inform the shareholders, if they determined to stop the mine, that the materials must be offered to the lords; and according to the Cost-book system, he maintained that any single shareholder could continue the mine if he thought fit. Those who were fired of the adventure might go out of the concern by the relinquishment of their shares.

The CHAIRMAN wished it to be distinctly understood that in the proposing of the resolution now before the meeting he in no way wished to disparage the value of the property. The truth was, a great deal of money had been spent, and there were those of the adventurers who declined to pay any more. If, therefore, there were any who believed the mine could be worked to a profit, a good opportunity now presented itself to purchase the concern of those who wished to retire. But if the majority, who had continued to pay heavy calls for so long a period, determined to stop the mine, the minority must form a new company, and take such steps as they thought proper.

Mr. NICHOLLS requested the Chairman to read the protest.

The CHAIRMAN declined, upon the ground that it was a protest from an absent shareholder.—Mr. R. NICHOLLS said that he, as a present shareholder, protested. The meeting would allow him, perhaps, to read a letter.—The CHAIRMAN protested against Mr. NICHOLLS continuing any observations, unless he spoke to the question before the meeting.

Mr. NICHOLLS said he was about to move an amendment to the effect that this mine be not suspended.

The CHAIRMAN reminded the meeting that the mine had been in operation for about 10 years, during which time there had been 71,995l. paid in calls, and there had also been realised from sales of ore 99,365l., making a total amount of 171,360l., that had been expended upon the mine without anyone connected with the undertaking having received any farthing benefit, excepting those who, of course, were fairly entitled to receive an advantage—namely, merchants, lords, and labourers; but those who had furnished the money had not received anything. As there did not appear to him to be any prospect, by continuing operations, of realising better results, he hoped the majority would wisely determine to at once discontinue operations.

Mr. R. NICHOLLS felt perfectly satisfied if the mine had been conducted upon proper principles that there would not have been such a loss. He contended that mischief had been done to the property by the managing agent, which he had no hesitation in saying he was at any time prepared to prove. It was to his mind a most unaccountable thing that the report made by Capt. Trelease was not allowed to be read or to be forwarded to shareholders; nor could he understand the reason for this on the last occasion he was not allowed to speak.—The CHAIRMAN: Simply because you were not a shareholder.

Mr. NICHOLLS said that immediately upon his return to Cornwall he sent Captain Trelease's report to each shareholder, so that they might have an opportunity of perusing it, and forming an independent opinion upon it. As an evidence of the value of the opinion of their present agent, he might instance the fact that he had estimated it would cost between 600l. and 700l. to do that which would not cost more than 20l.; that said a good deal for his judgment in working such a mine as Great Alfred. Some time ago their agent informed them that from the indications at the 130 fm. level he felt positive there was a course of ore underneath, but he appeared since to have altered his mind. Now had the 143 been extended to prove that point, every shareholder would have been satisfied, and no great expense incurred; and it was, therefore, a very unfortunate thing that those levels had not been driven. He concluded by moving an amendment that the operations at the mine be not suspended, assuring the meeting that it was in the power of any single shareholder to prevent the mine being stopped.

Mr. ALFRED said it was perfectly clear that there were present upon this occasion two or three different classes of shareholders—namely, those who had paid a great deal of money and lost it; those who had purchased their shares at a low figure, and had paid but few calls; and those who had become shareholders since the last meeting, and had secured shares, before voting, to consider that a very large proportion of the shareholders had gone into the concern to work the mine legitimately, having adopted the opinions of agents *ad nauseam*. He might also apprise shareholders of the fact that there were those present who were interested in the continuing the operations—such, for instance, as Mr. NICHOLLS, who, being a small lord, would derive some benefit. Now, his (Mr. Milford's) advice was to stop the mine at once. They had been over and over again told they had better give Great Alfred another trial. Some six months since a member of their committee—a man of great practical experience—had advised them to go on for another three months, which advice he (Mr. Milford) endorsed, and had been the same as heretofore—a very large loss. He admitted that in recommending the shareholders to go on he had been wrong. It was all very well for such gentlemen as Mr. NICHOLLS to advise them to go on, who, having bought a few shares since last meeting to enable him to speak, had never paid any calls—that the mine should not be stopped was to his advantage, he holding a small interest as a lord.

Mr. NICHOLLS said that he had held an interest, and had paid calls.

Mr. W. HOSKIN said he was an original shareholder, and had never disposed of his interest. The present was the first meeting he had ever attended in London, and he would take that opportunity of stating that he believed the same amount of work at their mine ought to have been done at a very much less cost than had been expended upon it. There could be no question it was a hard and tedious thing for parties to be periodically paying calls; and seeing that so large an amount had been expended upon their mine, would it not be better, instead of at once stopping the mine, to see if something could not be done to save it, and thus leave another chance to proprietors? He had attended meetings in Cornwall, where matters were in every respect as bad as they were now in Great Alfred, and the Chairman had taken votes for and against the stopping of the mine. Those in favour of continuing operations had paid a certain amount per share, while others, who were not in the mine, had not paid anything. And why, he would ask, should it not be the same in Great Wheel Alfred? They had an ample plant, and efficient machinery, and a comparatively small outlay, judiciously expended, would, at any rate, open up a chance to the shareholders of recovering some of the capital that had been expended. Although he had never seen the cost-sheets, yet he believed there were not more than 190 men employed, while their monthly labour cost amounted to between 1100l. and 1200l. He contended that the working of the mine with such a number of men should not cost so much by some hundreds per month. He knew it was a general practice, when expenses were lessened, to decrease the number of men employed; but that was the wrong place to begin to economise, for if there was any profit to be made it was by exploring the ground. In making those observations, he had no indirect interest to serve, either as a merchant or a lord. It was not long ago that he had entreated some of his friends to go into Dolcoath at 92. per share; since which there had been discovered a large deposit of tin at a deeper level; they had paid good dividends, and the market price of the subdivided shares was now 500l. He did not say equal results would ensue from a continued prosecution of the Great Wheel Alfred, but at the same time they had very excellent chances. He suggested that some method should be adopted for developing the mine at a much less expense, which he thought could be done.

under judicious and proper management, and with that view he seconded the amendment.

Mr. MIZROFF said he would inform proprietors that he had received a letter from the mine, informing him that the mine had never looked so poor.

Mr. CORN said the only question appeared to be whether they should continue or discontinue making calls, or whether they should stop the mine, and sell the reserves of ore, plant, and machinery, by which they would probably realise 11. or 21. per share.

The CHAIRMAN, in answer to the remarks of Mr. Hoakin with respect to the number of men employed underground, said that it was hardly probable the committee or agent would have recommended an increased number of men, seeing that those already employed were not producing a profit.

Mr. HOSKIN said he had referred to the number of men employed underground as being small, when the amount of the labour cost was considered. He contended they were paying a great deal too much for the number of men employed.

Upon a show of hands, there appeared for the amendment, 7; against it, 15; majority, 8. A scrutiny of votes was then demanded, when there appeared—For the amendment, present, 67; proxies, 408=475. Against, present, 851; proxies, 110=961. Majority against the amendment, 486.

Mr. NICHOLLS objected to any shareholder voting who had not paid his calls. The CHAIRMAN said the objection, he understood, could have no avail, for after deducting all shares in arrears of call, there remained a majority in favour of the resolution.

The resolution was, accordingly, declared carried, when some formal resolutions were passed. A vote of thanks to the Chairman and committee was unanimously passed.

The CHAIRMAN, in acknowledgment, thanked the meeting for the vote, and assured the parties, whoever they might be, who bought the mine to re-work, that it would give him great satisfaction if they succeeded in bringing it to a successful issue.

The proceedings then terminated.

WEST TOLVADEN MINING COMPANY.

A meeting of shareholders was held at Ball's Union Hotel, Penzance, on the 16th inst. Mr. THOMAS WESTON, of Tean, Staffordshire, in the chair. That gentleman read the notice convening the meeting, and the minutes of the last general meeting, and of an adjourned meeting since; these minutes he proposed, and Mr. STONE seconded, should be confirmed—a motion which was carried unanimously.

Mr. WESTON explained at great length the various transactions arising out of these minutes, which instructed the committee to investigate certain claims, arrange for the relinquishment of some shares, and generally to place the mine in a better position. Mr. WESTON's explanations comprised a mass of correspondence, all showing the interest the committee (headed by Mr. Weston) had taken in unravelling some very complicated transactions. The results were, that the committee had accepted the relinquishment of Major-General Buller's shares, as also those of Capt. Rickford; that after maturely considering the dealings between Captain James Thomas and Mr. J. D. Brunton, they had decided on recommending the speedy dismissal of Capt. Thomas from the agency of West Tolvadden, and of his son (a formal resolution was now passed to dismiss Capts. James and Charles Thomas, their services to be dispensed with from the present time, but their salaries to be reckoned to the end of September); that proceedings for the forfeiture of shares had been successfully taken in the Stannaries Court; that the committee had decided on the course to be adopted in reference to a claim by Capt. J. Donkin, for acting as purser under Mr. J. D. Brunton, as also on the terms to be made with a shareholder who had been put into the Penzance County Court.

Mr. Weston then stated that a balance-sheet had been prepared, showing not only the receipts and expenditure of the mine, but its assets and liabilities up to the present period, with the object of discharging debts now due to people, but demands made on the shareholders for debts of long standing, and of which they had been kept in complete ignorance; a friendly arrangement had been made with the Messrs. Harvey, of Hayle Foundry, who had taken bills of moderate date. Old bills of whose existence the committee were unaware, had been sent in to the amount of 1500.—one as late as only yesterday—but all were now charged up: 770 shares had been absolutely forfeited in the Stannaries Court, 300 more had been relinquished, and one gentleman would most likely relinquish 300 more. This brought their shares down to about 3600, but all were now bona fide holders, and he believed, would work and manage the mine in a business-like manner. Mr. Weston then read the following balance-sheet, with an occasional comment on some of the items:—

Amount of cost to June, 1861, as per cost-book.....	£3628	8	2
Rent of mine to Mr. Le Grice, and to the Duchy.....	102	10	3
Law cost.....	40	13	0
Auditors' and committee's fees.....	51	0	0
Ridden Mine, for engine.....	250	0	0=£4072
Original call.....	£1024	0	0
By subsequent calls.....	2342	16	6
Copper ore sold.....	81	13	8=3448

Leaving debit balance.....£ 694 1 3

A statement of assets and liabilities showed a balance of 4541. 10s. 5d. against the adventures to June 30.

Mr. DINGLE went into an estimate of the work to be done during the next three months: 23 ft. of the sea wall was complete, its whole length being 68 ft. The engine-house was nearly finished, the mine to do the work of the remaining work. The water was out to the 20 ft. level. Capt. Charles Pascoe had only recently taken office, and the following was his report:—

Since the last meeting the engine has been erected, and, with the exception of a little boarding, the engine-house finished. The boiler-house is not complete, there being about 8 perches of masonry more to build, and the roof to put on, which has been delayed to build the stack. The stack is now 36 ft. high, having 4 ft. more to complete the contemplated height of stonework, on which there will be carried up 30 ft. of brickwork. The bricks are on the mine, and when the stonework is complete the remainder will progress faster. There has but little been done to the breakwater of late, as the masons are proceeding with the most important work first. The water is in fork, and the engine-shaft is being sunk to the 30 with all possible dispatch. The eastern end, under the sea, will be discontinued, being already as near to the bed of the sea as we are allowed to dig. The western ground is hard, therefore we do not think of driving on it until we reach the next level. The indications are of a very favourable character, and when the ore ground is reached in the next level there is every reason to conclude that the result will be highly satisfactory.

Mr. STONE moved, and Mr. PHILLIPS seconded, that a call of 3s. per share be made, payable on Sept. 6.—Capt. Pascoe was appointed agent, at 6s. 6s. per month.

ENGLISH AND AUSTRALIAN COPPER COMPANY.

The half-yearly (extraordinary) meeting of proprietors was held at the London Tavern, on Thursday, Mr. R. A. ROUTH in the chair.

Mr. C. B. ROGERS (the secretary) having read the notice convening the meeting, The CHAIRMAN said, as the present was only the half-yearly meeting there was no printed report to submit to the proprietors, but with their permission he would submit a short statement, showing the prosperity of the company, and some few extracts from the last despatches received from Mr. Hamilton on the other side. He would then make some general observations upon the present position of the company, and conclude by proposing a dividend from the profit realised during the current half-year. When they met in February last their Chairman (Mr. Schneider) informed them that there was every prospect of the company progressing satisfactorily. He (Mr. Routh) was happy to say that notwithstanding several circumstances, to which he would afterwards allude, which had operated against the market price of copper, the anticipations of their Chairman had been realised. The quantity of ore received from the Burra Burra Mine from June 30, 1860, to May 25, 1861, had been no less than 14,659 tons; the quantity of ore smelted at the works during the same period had been 10,373 tons, against 6891 tons during the whole of the previous year. The quantity of copper made from June 30, 1860, to June 25, 1861, the date of the latest advices received from Adelaide, had been no less than 3007 tons, against 1975 tons made in the previous year—that showed a clear excess of more than 1000 tons of copper made this year over that made during the preceding corresponding period. The quantity of ore shipped to this country to June 25 was 6010 tons, and the quantity of copper shipped to this country and India was 984 tons, against the total quantity shipped last year 160 tons. Those figures, he thought, would speak for themselves. The average number of furnaces at work during the 46 weeks comprised in the period from July 1 to May 25, was 8 against 6 1/2 for the same period last year. The stock of coal on June 25 was 3769 tons, and the quantity of wood 4813 tons. That was a short analysis of the result of the working during the past year. He would now proceed to read one or two extracts from the last despatches, which would give an idea of what had been done on the other side. The first to which he would refer was with respect to the cartage. It appeared that up to June 15 their teams had done 14,407 tons; taking into consideration the loss in light loading down, and the fact that they had been short of drivers during the season, and that the season was a very wet one, it might be safely concluded that under more favourable circumstances had been done at least another 3000 tons. As regarded the new works at the port, he considered that a matter of the greatest importance, and one which would very materially affect the future position of the company. The directors had thought it advisable to erect some new furnaces at Adelaide, which he was glad to say, were now in a very advanced state of progress. Indeed, they hoped to learn by the next mail that those furnaces were actually producing copper for the benefit of the company. Those works were not adopted without a great deal of consideration. It had been found there was a great quantity of ore at Burra Burra ready for smelting, but that there existed great difficulty in getting up sufficient coals to the works, which had induced the board to determine upon the erection of some furnaces at the port. Calculations had been made by Mr. Hamilton, who estimated that the saving which would be annually effected by the smelting the ore which would otherwise have to be shipped to England would be between 8000l. and 9000l. Now, he (the Chairman) estimated was not quite so high as that, but he thought it to be perfectly clear that, by the erection of these works at the port, there would be an annual saving of about 5000l.

Dr. GODDARD enquired what had been the cost of these new works?—The CHAIRMAN replied between 8000l. and 9000l., but he did not contemplate it would in any way affect the financial position of the company on this side, because it would be found that the advantages that would accrue from smelting the whole of the ore would be incalculable, for it would not only be the means of saving the freight, and other expensive matters on this side, but it would at the same time give them the command of the market, because with copper they were in a much more favourable position than if they only possessed the ore—in fact, he apprehended the works would pay for themselves in twelve months.

The Rev. Mr. DUNN enquired if the meeting were to understand the whole of the ore would be smelted at the new works?—The CHAIRMAN said that the old works would, as usual, be kept in full efficient working, but the new furnaces at the port would smelt the new works would also smelt ore from other companies, so as to keep the new works in full operation. He had omitted to mention the fact that an immense saving would be effected by these new works, in obviating the expense of the carriage of coal from the port to the old works. There was a railway, but it had not been extended beyond 50 miles towards the works, and in course of years he thought there was no question it would be carried to the works. The coals were taken from Newcastle, delivered on the wharf, in the immediate neighbourhood of which were their new smelting-furnaces, so there could be no question that, of all others, was the spot for the smelting of their ores.

The Rev. Mr. DUNN enquired if the directors thought there was any probability of the company obtaining ore from other companies?—The CHAIRMAN said that was a subject which was meeting the serious attention of the directors. They were exceedingly anxious not to jeopardise their present favourable financial position by the extension of their trade beyond the limits of their capital, considering it of far greater importance to maintain regular dividends than to enter into a trade which might have the effect of crippling them from want of capital. The next point to which he would refer was to Henderson's patent. Now, Mr. Henderson, it appeared, had discovered a means, by a wet process, of profitably reducing low class ores, which were found in very large quantities at the Burra Burra Mine. He (the Chairman) did not know whether there would be any difficulty in reducing low sulphurets, but he might inform the meeting that there would be some difficulty with respect to carbonate ores, for this company was the sole owners of the patent which possessed the right to reduce carbonate ores upon the only principle which had yet been discovered of efficiently reducing them. No doubt the

shareholders were aware there were 10 furnaces in course of erection at Wallaroo, which were situated 160 miles up the country, but the English and Australian Copper Company was making copper at the port long before the works could be finished at Wallaroo. This company stood in the position of the highest credit, but the board wished success to any other company that might be formed. He would now refer to two circumstances which had militated against their company, and all other commercial enterprises during the past six months—they were circumstances over which no one could possibly have any control; the first was, they had had a short harvest, which, by Government figures, occasioned a loss of 30,000,000l.—that amount was sent from this country for the purchase of foreign corn, which had a very material effect upon our money market.

The other was a circumstance which no one could have anticipated—they found that the republic of America, which had always been regarded as the model of the republican world, in arms, "brother against brother," which paralysed the whole trade of the country. He had for the moment referred to those circumstances—which seemed so far distant—because it might have been thought by some that they could not possibly have affected their company. The American question had very materially affected the metal market, more particularly copper, which had been subjected to the most violent fluctuations, the price having fallen far below all the calculations which any ordinary person could have made.

Notwithstanding those depressing circumstances, the directors had acted so judiciously that they did not anticipate any sensible effect upon their financial position would be experienced at the end of the year from that cause, which otherwise must have affected them most materially. During the whole of that period they had experienced no difficulty with regard to their monetary affairs, and he believed at the end of the year their balance-sheet would show their financial position to be in an exceedingly favourable condition. As an evidence of the growing prosperity of their company, he might advert to the fact that, for the first time, the directors of the Burra Burra Mining Company, in their report, thus referred to them—"Large deliveries of ore had been made to the English and Australian Copper Company, whose operations have been carried on with increased vigour, and which is evidenced by the fact that no less a quantity than 1231 tons of fine copper have been received by them during the past six months."

The CHAIRMAN replied it had been renewed for five years.

Dr. GODDARD enquired what percentage of ores Henderson's patent could profitably reduce?—The CHAIRMAN replied that Mr. Henderson undertook to reduce 17 per cent. ores to a product of 65 per cent., and even to copper itself. As in various parts of the colony there were being rapidly opened out enormous quantities of minerals, their company were no longer solely dependent upon the Burra Burra Mines, so there could be no question it rested upon a very wide and firm basis of prosperity; and if the principle of strict management were continued to be carried out, their present position, however favourable it was, did not at all evidence the prosperous position in which the undertaking would be placed in a few years. He had omitted to state the absence of their Chairman (Mr. Schneider), which they must all regret, was occasioned by a domestic illness.

Dr. GODDARD enquired whence the capital had been obtained for the erection of the new furnaces?—The CHAIRMAN replied that proprietors were aware they possessed a reserve fund, which, under careful supervision, had been gradually increased, and which he wished should not in any way be touched. By the addition that would this day be made it would stand at 10,000l. Three per cent. Consols. Now, as they had no doubt the new works would be paid for during the current year by the saving they would effect, he objected to the reserve fund being entrenched upon. As those works would not be completed in some time, their cost would be a matter for consideration next year. In all probability they would find the works would cost them every London included, about 10,000l., that the proposition would be to let the cost run over two or three years. In answer to other questions, he stated that the dividend of 5s. 6d. per share which he was about to propose would absorb, including the amount to be carried to the reserve fund, a sum of 9620l., to meet which there would be 12,000l. in the hands of the bankers. The actual financial position of the company upon this side, after the payment of all liabilities and the realisation of all assets, would be a credit of about 22,000l.

A dividend of 2s. 6d. per share for the current half-year having been declared, a vote of thanks to the Chairman was passed, when the proceedings terminated.

FOREIGN MINES.

UNITED MEXICAN.—June 13: Mine of Jesus Maria y Jos6: This mine is in quite as favourable a state as when I last reported, and if, as is expected, a "conducta" leaves for the coast early next month, I shall be enabled to make another remittance to a fair amount, though less than that sent off in April. The profit in May on five weeks was \$16,976, and two very good rasps (gold) have just been received from Casas Blancas and Duran, worth, duties, &c., deducted, \$16,500. In the last three weeks 3034 cargas of ore have been extracted by day miners, of which 1600 cargas were sold for \$14,527. The business' sales, \$4306, half on the mine account.

ST. JOHN DEL REY MINING COMPANY (Limited).—Advices from Brazil: Morro Velho, July 17.—PRODUCE: I have very great pleasure now in advising the largest monthly produce yet obtained in Morro Velho. The gold extracted in the month of June amounts to 42,086 oits.; it has been derived as follows:—

	Oitavas.	Tons stone.	Oits. per ton.
From General stamps.....	23,379	from 3785-6	= 6 1/2
" Herring (East Bahu).....	8,219	1025-6	= 8 0 1/2
" Lyon (W. & Mid. Cech.).....	8,366	978-6	= 8 5 1/2
" Arrastres.....	1,995		= 0-331
" Fraia stamps and arrastres.....	2,195		

Total stamps and arrastres, 42,086 758-0 = 6-890

The above produce cannot be compared with any previous month, being the largest and best monthly return yet obtained. The general standard yield from the ore treated, and also the produce per diem, are the highest on record. This result is gratifying for a 30-day month, having five Sundays and one general holiday—St. John's Day.

COST AND PROFIT.—PRODUCE for June being 42,086 oits.
Less loss in melting.....339 oits.
Leaving.....41,747 oits., at 7s. 7d. per oit. £15,866 19 9
The cost for June is Rs. 3,642 6/10, exchange 2s. 3/4d. 9,235 10 5

This leaves the profit for June of.....£ 6,631 9 4

This is a better profit than was realised in May, though not quite so large as was shown in March, these months having 31 days each. The rate of exchange is rather high, and acts unfavourably on the cost in sterling, but the prices in materials and provisions have been rather below the average. The cost is not larger than might be expected taking into account the extra work we are now carrying on, the benefits from which will be fully delivered hereafter. At present prices of provisions are declining, the general stock is reported to be large and low.

EAST KONGSBERG.—The following extracts from a letter received this day from Mr. D. Macmillan, dated Kongsberg, 15th inst., will, I am sure, be read by you with much interest. Stamping Mill: With respect to stamping mill, Mr. Rordam is preparing the plan of one, and will send it with an estimate as soon as he possibly can. He does not intend to ask you to lay out so much money as the Vionen Company did; probably less than a half will be sufficient for our requirements. The place for erecting it is already laid out on the bank of the Ramberg River. Traders have visited the place, and have given in estimates of the cost of erecting, &c.—Attilie: I have no doubt whatever that the Anna Sophia attle will turn out as rich, if not more so, than the Vionen's. I am now keeping an account of all the ore added to the stock whenever we have our stamps ready. The stock is small, but the ore contained in this mill is of fine quality, and will produce a good deal of silver. With respect to the mines, I beg to report as follows:—Sunde: We have set the sink in this mine to four men, at \$64 per lachter; also a slope to the east of the sink to two men, at \$40 per cubic lachter. The drum still continues to give silver in every blast. We have discovered a small vein leading from the drum to the principal vein. We hope that the drum will increase in size and productiveness in depth.—Ramsdahl: We have set the top slope in this mine to two men, at \$28 per lachter; the bottom slope to two men, at \$36 per lachter. The vein in this mine is still poor, but we have good hopes of getting silver in the bottom slope this month. The adit leading into this mine has been set to two men, at \$20 per lachter; the ground is easy for draining. We have intersected a vein of calcareous spar in driving this adit, which will be of great use when the adit is finished. Mr. Rordam will send you a sketch of Ramsdahl trying the position of this vein and his proposed plan of working it.—Neues Gluck: We have set the driving of the adit and cauter adit to four men, the former at \$16 and the latter at \$12 per lachter. The ground is favourable for driving.

ENGLISH AND CANADIAN.—H. Williams, F. Bennetts, jun., August 6: Morrison's Adit: This is advanced, east of Grass shaft No. 2, 2 fms. 5 ft. 11 in., a favourable course of fine blue killas having come in, but without any other change to notice; we have, therefore, re-set this to continue for August by four men, at \$52 per fm., being a reduction of \$8 per fm. on the price paid for last month.—Adit Level South, on West Branch of Fremont's Lode: This is advanced 1 fm. 4 ft. 7 in., the lode continuing about 4 to 5 ft. wide, composed of carbonate of lime, quartz, chlorite, and a little chlorite, and contains a kindly mixture for copper bearing. We have re-set this to continue for another 6 ft. only, at \$70 per fm., being an increase of \$4 per fm. on the price paid for this last month.—Adit Level North, on Sewell's Lode: The winze from bottom of this level was sunk during the past month 2 fms. 2 ft. 2 in., the lode continuing about 3 ft. wide, though not quite so rich in copper during the latter part of the month as it was during the first; it, however, yielded during the month about \$130 worth of ore when dressed. The lode still looks kindly, and we have re-set to sink for another 2 fms. by four men, at \$110 per fm., being a reduction of \$2 per fm. on the price paid for last month.—Adit Level South, on Sewell's Lode: The winze from bottom of this level was sunk 1 fm. 1 ft. 3 in. without any change, and, having occasion for the men employed here to open up a surface stope, the stand suspended for the present.—Hail's Lode: We kept four men employed on this during last month. The south branch we were enabled to set by contract to two men, and broke 10 fms. 1 ft. of ground, producing about \$130 worth of ore. There is a good lode still in sight here, and we have re-set to stope, as directed, for this month to two men, at \$13 per fm., being an increase of \$2 per fm. on the previous price. From the branches taken down at east side of the lode we obtained about \$220 worth of ore by the labour of two men.—Kent's Shaft: This shaft was sunk 2 fms. 1 ft. 6 in. on July 13, being 10 in. over the 10 fms. agreed for the men earning the stipulated premium of \$4 per fathom. We have since put in the solier over clatern, and driven west towards the lode 5 ft. 3 in., there being another 3 ft. 9 in. to drive the length required for the pit, when we shall re-set to drive the usual width for the cross-cut, which we trust to do on Saturday next, and we have the fullest hopes of intersecting the lode about the beginning of September.—Shaw's Lode: We broke in this surface stope 11 fms. 0 ft. 9 in., and obtained about \$120 worth of ore. There is a good branch of ore in the north end of this stope, and we have re-set the same for August at \$12 per fm., being an increase of \$3 per fm. on the price paid for last month.—Campbell's Lode: We have commenced a surface stope on the north branch of this lode, which we have set to two men, at \$11 per fm. In our surface explorations we discovered three very promising lodes, about 50 fms. to the south-west of Kent's shaft, and obtained from them some good rocks of purple and yellow copper ore. The operations on these lodes will appear under the following heads in future cost-sheets and reports:—Stobart's Lode: This lode is about 30 in. wide, and composed of quartz and yellow copper ore of great richness. We have commenced a surface stope on same, which we have set to two men, \$10 per fm.; we obtained two large rocks of ore from this, weighing over 4 cwts.—Tilt's Lode: This is about 4 to 5 ft. wide, and composed of fine gossan, with green carbonate and purple and yellow copper ore in fair quantity. We have also commenced a surface stope on this, which we have set to four men, at \$11 per fm. We have already obtained over 1 ton of fine prills from this.—Bennett's Lode: This lode is between 3 and 4 ft. wide, composed of quartz, gossan, and green carbonate and purple sulphuret of copper of good quality. We have also commenced a surface stope on this, set to two men, at \$11 per fm. quantity. We have now a pile of ore ready for forwarding for shipping, which we estimate worth about 600l., besides about 300l. worth on the floors, in a forward state of preparation for shipment.

The BRYNGLASS SILVER-LEAD MINES were offered by auction by Mr. William Hall, at the Fox Hotel, Shrewsbury, on Thursday, when the highest bid was 450l.; this being below the reserve, they were bought in, but the mines have since been sold to Mr. Stephen Barker, of Birmingham.

Mining Correspondence.

BRITISH MINES.

ABERDOVEY.—A. Ede: The ground in the cross-cut at the 42 is much the same as last reported. The stopes on the main lode, in the back of the 32, north and south of winze, are producing respectively 1 and 1 1/4 ton per fathom. In the 12 the lode in the end has become poorer, so I have removed two men to the stope. All surface work is going on satisfactorily. The sale of ore on the 16th inst., of 27 tons 12 cwt., realised 111. 11s. per ton.

ALFRED CONSOLS.—S. Uren, T. Hosking, Aug. 21: The main lode, driving east of Davey's engine-shaft, at the 160 is without change. The 150, driving east of said shaft, is 4 ft. wide, producing stoves of ore. No lode taken down in the rise over the back of the 140 for the past week. The north part of the main lode, driving east of Robert's stope, at this level, is worth 107. per fm. The 130, driving east of the above shaft, produces stoves of ore. The 120, driving east of the above shaft, continues to improve, now 3 ft. wide, worth 187. per fm.—a kindly looking lode. No. 1 winze, in bottom of the 140, on the north part of the main lode, is worth 257. per fm. Robert's stope is worth 151. per fm. Hosking's stope is worth 107. per fm. Floyd's stope is worth 307. per fm. Richard's stope is worth 127. per fm. Nothing new in any other part of the mine.

ASHBURTON UNITED.—W. Edwards, Aug. 21: At Hobson's engine-shaft every effort is being made by eight men, in driving north in the 78, to ascertain the value of the lodes at that point as early as possible. In the 67 east the lode is about 1 foot wide, producing good tin work, and from present appearances we have every reason to expect an improvement. In this level west, for the last 2 fms. driving, the lode has been disordered, but we hope as we advance the lode will become more defined. The winze sinking below this level (east) is progressing favourably. We have commenced, by rising in the back of this level, with the No. 2 winze in the 85, which improves the ventilation in this part of the mine, and enables us to set additional tribute pitches on a rich lode. In the 55 east we have commenced a cross-cut south on the slide to intersect Beam south lode, which has never been seen east of Hobson's engine-shaft; the ground is very favourable; driving at 31. 10s. per fm. A winze is also commenced sinking in the bottom of this level, by six men, which will be prosecuted with the utmost vigour to ventilate the 67 and open more tribute ground. In the 55 end west, on the lode which underlies south, the ground is favourable for driving; the lode is at present small and of little value. The end west of Harry's shaft continues without alteration of importance. In the 35 west the lode is about 2 ft. wide, of a very promising appearance. The various pitches throughout the mine are looking well. The engine and pitwork are working well. We have also completed twelve new stamps, which are at work, and have done it, by extra exertion, in considerably less time than we calculated.

BEDFORD CONSOLS.—Capt. Mitchell, Aug. 22: In the middle adit level the north lode is disordered at present, being mixed up with killas; the ground is easy for driving, and good progress is being made. The No. 1 south lode is about 20 in. wide, consisting of munda, spar, capel, and occasional stoves of copper ore. Nothing has been met with in the south cross-cut yet, but there is a little water coming from the end. Bickle's pitch, in the back of the middle adit, will yield about 1 ton of ore per fm. Ball's pitch, in the back of the 27, is not looking so well; the lode will yield about 1 1/4 ton of ore per fm. We shall sample, on the 30th inst., about 40 tons of copper ore.

BEDFORD UNITED.—J. Phillips, Aug. 20: We are driving by the side of the lode in the 115 west. The lode in the winze sinking in the bottom of this level is 3 ft. wide, and worth 3 tons of ore per fm. The lode in the 103 west is 3 ft. wide, and worth 3 1/2 tons per fm. Yandell's and Manual's stopes in the back of this level are worth 4 1/2 and 3 tons per fm. The stopes in the back of the 90 west are worth 3 tons per fm. We have not taken down the lode in the 58 east. The lode in the 47 west is 2 1/2 ft. wide, composed of spar, munda, and spots of ore—a promising lode.

BUCKLE.—W. Disson, Aug. 22: The rise on the waddy pipe, at Charlton's stage, where we have two men rising, has been promising appearance, but we do not obtain much black lead of first quality. At Gill's stage, where we have four men driving, west of Leek vein, we made a discovery of black lead yesterday, and have obtained 6 lbs. of first quality, and 14 lbs. of second-class; it continued on this morning nearly horizontal, but is towards the 4 to 6 in. wide, and 12 in. in length. The workings from the Grand pipe, towards the intersection of Daniel's vein, is progressing favourably; there is not much appearance of wadd, nor do I expect any before we intersect the said vein.

BYNFORDE HALL.—T. Pierce, August 22: Hammersley's vein is looking a little better than it was last month, the vein having opened a little, and more promising for ore. The north cross-cut from Page's shaft is without alteration. The 100 yard level is in very promising ground, but we cannot say what is the width of the said course of ore, because we have not seen any of the sides, but that will be proved soon. Bostock's vein is without alteration since my last.—Granger's Shaft: We have begun to cut a ledge at the depth of 70 yards, and after that we shall put up the whim, and soon work on the vein.—Simon's Shaft: We had the bottom of this shaft yesterday, and the vein is very strong and in ore ground, in which we shall commence to sink the shaft deeper in a fortnight or three weeks time after cutting a new ledge. We have had the bottoms of Lloyd's shaft, both east and west of the shaft, and the vein is promising well. All other parts of the mine are without alteration.

GWIOG.—(Special Report.)—J. Williams, Aug. 16: The mine is situated in Haikin Mountain, surrounded by the best mines of the day; and the locality cannot be surpassed for mining operations in any part of the United Kingdom. I intend to make a few remarks on the operations now carrying on in this mine, as follows:—Bargains or Pitches: First, Under the 132 yard level, east of engine-shaft, near the forebrest, work on tribute; the lode is large, and will produce from 2 to 3 tons of ore per fathom; also, under the same level, nearer the engine-shaft, a bargain in raising lead ore, which will produce from 1 to 2 tons of ore per fathom. The 132 yard level, driving west of engine-shaft, is hard and unproductive at present; and the said level is only about 5 yds. short of reaching the run of ore seen in the No. 2 winze, sinking under the 105 yard level, and we daily expect to intersect the eastern end of the said course of ore by the driving of this level. The No. 2 winze, sinking under the 105 yard level, is now just in fork to the bottom of the said winze; the lode is large, seems to be widening out, and is looking splendid, with a course of ore fully 2 ft. wide of solid lead ore, and if it continue this size it will produce at least 8 tons of good quality ore per fm. In No. 3 winze, under the 105 yard level, further west than the latter one, the lode looks well and large, composed of iron, gossan, blue shale, dark limestone, and lead, and will produce from 2 to 3 tons of ore per fm. The 105 yard level, driving west, is hard and unproductive at present, but the ground and lode are of a congenial and encouraging character for making a course of ore at an early period. The stopes under the 105, west of engine-shaft, are not so rich as the former ones; and I have been informed by the agent that those stopes have improved of late, and now produce from 1 to 2 tons of ore per fm. The water was in the engine-shaft, therefore I could not see the bottom. The mine is in a first-rate working order, and appears to have been worked with economy and much judgment, and generally does great credit to Captain Lloyd; and if the same course of working be continued, I feel no hesitation in saying that their future progress will develop in time one of the best mines in the country. I should strongly recommend a new shaft to be sunk to the west of the present engine-shaft, to meet the two levels, say the 105 and 132 yard levels, as I feel confident that it will be impossible to work the western end of this mine without another shaft to ventilate it properly. I have every reason to believe that by so doing the shareholders will be well rewarded hereafter.

J. Lloyd, August 20: In the 150 fathom level nothing has been done in driving since last advised, the men being engaged in sinking an ample depth to contain the collection of water in the shaft for 12 or 24 hours, and save the engine to be worked more than once a day. The lode in the sink shows improvement, and produces good stoves of ore. The stope west of winze, under the 132, east of ditto, will produce about 2 tons per fm. The lode in the 132 west shows an improvement in width, and more carbon intermixed.

The stope west of No. 1 winze will produce about 4 tons per fm. of sinking. The stope west of No. 3 winze is worth about 3 tons per fm. The 105 west is without change.

BYNFORDE HALL.—J. Roach, Aug. 22: The lode in the 105 yard level, driving west, is in a very promising position, and we have seen more ore this week than for some time past, and have broken several solid stoves from it. I have not seen it more promising than it is now before entering into a bunch of ore. The rise or stope above the 10 is fluctuating in produce, yielding occasionally large pieces of solid ore. The winze sinking under the 10 is without alteration. The 25 cross-cut has not yet reached the north part of the lode. As soon as it is intersected, driving on its course under the great length of ore ground in the level above will at once be resorted to, where there is every probability of our meeting with deposits of ore of great value.

BULLER AND BASSETT UNITED.—W. H. Pascoe, Aug. 22: The lode in the 100 fm. level, 8 fathoms east of engine-shaft, maintains its (3 ft. wide), composed of munda, and iron; there is too much of the latter in this locality for the production of copper. In the same level, 6 fathoms west of shaft, the lode is also 3 feet wide, much of the same character as in the 100 east. The lode in the 80, east of engine-shaft, is 2 1/2 feet wide, composed of soft spar, prill, and flookan. In the 60, west of shaft, the lode is 3 feet wide, made up of friable quartz, pench, and munda, spotted with yellow copper ore—a very kindly lode. The country is also changed into a blue and congealed granite, much of the same character as in the adjoining productive mines.

CAMBORNE CONSOLS.—William Roberts, Aug. 21: In the 50, driving east on the cauter, the lode is improved; it is now 1 1/4 ft. wide, producing about 1/2 ton of good ore per fathom

stop the lode is about 7 feet wide, and worth about 1½ cwt. of tin per 100 sacks; stopping by six men, at 30s. per m. In No. 3 stop the lode is about 5 ft. wide, and worth 2 cwt. of tin per 100 sacks; stopping by four men, at 40s. per m. In the same level, west of Walker's shaft, we have a good lode for about 6 fathoms in length, the tin part averaging about 2 feet wide, and worth 15 cwt. per 100 sacks, and lengthening back eastwards towards the engine-shaft. I would remark that this good tin ground is all virgin ground throughout this mine, which very likely will prove good and lasting dividend mine. The 20 ft. level is being driven west of Parry's shaft, by four men, at 41. per m.; under the lode in this part we have cut into the lode in different places and found tin, but I consider the best ground is further west. Walker's shaft is being sunk, by six men, under the 60; here I expect hard ground in sinking through the lode, as it is full 2 fms. wide, after which we shall have easy ground. We shall light the fire in the burning-house to-day, and get on with the tin as fast as possible. All the machinery is in good working order.

DALE.—R. Nines, August 21: The portion of the Pipe vein we are now working continues as valuable as when I last wrote, worth 180l. per m. and from present appearances I think it will soon be of much greater value. The new shaft has been sunk 6 ft. during the past week, and is down 25½ fms. from surface.

DEVON NEW COPPER.—P. Hawke, Aug. 21: In sinking the engine-shaft below the 78, there are found to be, continuous in depth, floors of white clay-slate; there likewise exists in the strata in connection with this small veins of mundle, containing spots of yellow copper ore, passing obliquely from the country into the lode; this is a first-class indication. In driving east at the 78, in the leader portion of the lode, I find it to be much larger in the bottom, and by far the best prospect goes down in the bottom of the level than in any part above it. The end west, on the leader (78), is not so friable and decomposed as it is eastward, the ground being rather hard, but I expect a change shortly. The machinery, &c., are in excellent working order.

DEVON UNION.—Capt. Donnell, Aug. 20: We have sent down the main rods, and fixed the lift in the clatern at Quirk's shaft, and the shaft is now in regular course of sinking below the 12, by six men. The engine-shaft, is cased and divided to the bottom. We have at the 40 to drive west, by six men. Since my last report the water has been drained from the 15 east, and we have discovered that there is another level still further north than any we have before seen, which is driven on a north lode; as far as can be seen the lode varies in size from 10 inches to 2 feet wide, composed of gossan, prian, and quartz, intermixed with spots of black ore. We also find that the eastern shaft, that was reported to have been sunk deeper than the 10, is sunk as deep as the 15; this level, and, indeed, the entire shaft is, however, full of stuff, which we purpose to clear, in order to ascertain what it is made of; this will also be very useful for purposes of ventilation. There is no alteration to notice in the 28 east since my last report; therefore, seeing this lode to the north in the level above, we propose to drive a cross-cut north in this (the 28), to cut it in order to prove which is the main lode.

DYNGWAL.—E. Davies: The 70 east has been driven 1 ft. 10 in. further east along the lode, which opens kindly, and is producing 20 cwt. per m.; this driving is going on steadily by four men, and two stops are worked by four men each; the backs of the stops are in a fine ore lode for this morning. In the backs of the 60 east the lode is large, from 9 to 10 feet in width, and continues ore; it is worth on the average from 20 to 25 cwt. per m.; the stop behind the lode is still large and ore, produce varying from 5 to 40 cwt. per m.; the average 22 cwt. per fathom. In the backs of the 30 east the produce has averaged 15 cwt. per m. In the backs of the 40 west 3 feet has been risen in a stop, and 5 fms. 4 ft. of ore ground broken; this was a trial stop, and barely produced 2 cwt. per fathom; another stop west is a little richer, and has produced 7 cwt. per m. In the 40 east this level is yielding 1 ton per m., and in taking down all the lode a considerable further quantity; in the backs 7 fms. 2 ft. was broken of exceedingly rich quality; for the whole length, this has been the richest stop we have ever worked in Dyrngwal; it has produced 3½ tons per m., and looks quite as well as present. I would remark that this ore ground has been expected by us for the last twelve months, but the realisation is not much more than a month; we have now six men to stop, and four in the end. The 32 has been pushed on as fast as possible, so as to bring the end into the ore ground; we have driven 1 m. 3 feet back on the lode towards the engine-shaft on a piece of ore ground, which has produced from 6 to 8 cwt. per m. The drawing and dressing have gone on well. I am going to charter a vessel that will take about 40 tons. If I succeed in getting her, she will be loaded these things.

EAGLEBROOK.—H. Tyack, Aug. 22: The lode in the winze sinking from the 10 to the 20, 75 fathoms west of the engine-shaft, has considerably improved; it is from 4 to 6 feet wide, and is a rich lode, and the character of the ground is changing for the better; and, as our end is now approaching the ore ground in the winze, I hope to be able to report favourably of this shortly. We have taken the men from driving eastward in our 30 m. level, to assist the men in sinking the winze, where the water is rather quick. As soon as we have communicated to the 20 the men will resume their bargains as before. In the 30 west I have no alteration to report. The dressing and surface operations are going on favourably.

EAST BEAM.—J. Webb, Aug. 22: The engine-shaft is sunk 7½ fathoms. The horse-whim is at work, and with this we shall be enabled to sink several fathoms while the engine (now brought on the mine) is being got ready. The ground in the engine-shaft, and in the lode, is improving, and the water is being kept down.

EAST CARN BREA.—F. Glanville, Aug. 17: The engine-shaft to sink below the 50 by nine men, at 25l. per m. The 50 to drive east, on middle lode, by four men, at 6l. per m.; lode producing 2 tons of copper ore per m. The 50 to drive west, on middle lode, by four men, at 8l. per m. The 50 cross-cut to drive south of engine-shaft by six men, at 7l. per fathom. The 50 cross-cut to drive north of engine-shaft by four men, at 8l. per fathom. The winze to sink below the 40, on middle lode, by four men, at 6l. per fathom; lode producing 2 tons of ore per fathom. The winze to sink below the 40 west of cross-cut, on middle lode, by four men, at 6l. per m. The 40 to drive east of cross-cut, on south lode, by four men, at 8l. per m.; lode producing 2 tons of ore per fathom. The 40 to drive west of cross-cut, on south lode, by four men, at 8l. per m.; lode producing 2 tons of ore per fathom. The 26 to drive east, on south lode, by two men, at 5l. per m. The 26 to drive west, on south lode, by two men, at 3l. per m. The 30 to drive east, on south lode, by four men, at 4l. per m.; lode producing 1 ton of ore per fathom. The 30 to drive west by two men, at 4l. per m.; lode producing 1 ton of ore per fathom. The winze to sink below the 26, on south lode, by four men, at 5l. per m. The western shaft to sink below the 30 by nine men, at 8l. per fathom.

EAST DEVON GREAT CONSOLS.—Thos. Richards, Aug. 20: The sinking of the engine-shaft progresses satisfactorily. In the 40 west there is no change to notice. In the cross-cut south we have intersected a branch about 6 in. wide, producing a little copper ore; the ground continues favourable for progress and mineral.

EAST GUNNIS LAKE AND SOUTH BEDFORD.—J. Phillips, Aug. 22: The lode in the 36 east is a little improved, now worth 4½ tons of ore per m. No. 3 winze is still worth 3 tons of ore per m. No alteration in any other part of the mine.

EAST PROVIDENCE.—T. Uren, Aug. 20: There is no change to notice in the lode at the new shaft since last reported; it still shows a very promising appearance, and worth 9l. per m. The lode in the 20, east of new shaft, is worth 4l. per m. The lode in the winze in bottom of the 20 is worth 5l. per m., but having all the water in the mine to drain by manual power, we are obliged to suspend this winze for the present until the flat-rods are erected, and the engine put to work, which will be completed when the new shaft is sunk to the 30.

EAST ROSEWARNE.—J. James, Aug. 21: The lode in the 55 is much as reported on Saturday. We have cut a small branch in the 22 cross-cut north, mundle and copper, but do not think it to be the main part of the lode. We calculate to sample on Tuesday next about 65 tons of ore, which, I think, will realise 450l.

EAST TREFUSIS.—J. Pope, Aug. 22: At Smith's engine-shaft, sinking below the 58, the lode is 18 inches wide, spotted with copper ore. In the 34, east of cross-cut, on Trevalley lode, the lode is 2 feet wide, and producing occasional stones of copper ore, quartz, and chlorite. In the 22 ft. level, west of the cross-course, on Smith's lode, the lode is 12 inches wide—unproductive. At Trevalley flat-rods shaft, sinking below the deep adit, the lode is 3 inches wide, continues to yield stones of copper ore, and looks promising to further improve.

EAST TRESKERBY.—J. Nancarrow, Aug. 17: The alterations in the pitwork at the flat-rods were completed last week, and we are now in full course of sinking. The ground continues good, and the lode never looked better, or more likely to prove a valuable one to the adventurers. In the 20 cross-cut south the ground improves, but nothing further is intersected. The end east, on the north lode, improves, and contains more ore than has ever been seen there before, and is letting out more water, which indicates favourably.

EAST WHEAL FAIRMOUTH.—Wm. Hancock, Aug. 20: The 8, below the adit, is extending west of the engine-shaft, and is 3 ft. wide, composed of capel, prian, blende, with occasional spots of yellow copper ore, and a small portion of tin, not enough to value; the same level is extended east of said shaft about 1 m. 5 ft.; the lode is 13 in. wide, composed of flookan, capel, and mundle, producing of the latter 12 cwt. per m.; the ground is good for progress, and the water issuing very strong from the lode, so much so that we cannot keep it and draw the stuff with the present horse-whim, consequently I am obliged to suspend all operations below the adit for the present; it is very probable we might be able to keep the water under with whim-barrels by putting up another whim on the engine end of the said shaft, but this will be expensive working in order to drive a level only 5 fms. below the adit. To prove the lode below the latter level the sooner we put up an engine the better. I have put six of the sumptuous drive the cross-cut at the adit level, to intersect the lode seen in the engine-shaft, just below the surface, and according to its bearing where seen, I calculate we have about 10 fms. to drive to intersect it. I have also put the other three sumptuous and three labourers to clear up an old shaft sunk by the former workers, east of our present workings, where I have been told there is a large lode that will produce good work for tin, which lode is very likely to be the same that we are now driving to cut at the adit level, and I hope it will prove to be a good one.

EAST WHEAL GLENVILLE.—G. R. Odgers, W. Bennetts, Aug. 17: The lode in the engine-shaft is 3 ft. wide, producing 3 tons of ore, with good work for tin, say about 15l. per m.—a very kindly lode. The lode in the 35 west is about 12 in. wide, composed of quartz, gossan, and prian, yielding good work for tin, and looking better for copper. The lode in the 25, east of shaft, is 18 in. wide, of quartz, gossan, peach, and prian, and yielding a little tin—looking more promising. The lode in the 25 west is without any alteration. We hope in the course of a few days to resume the 35, east of the shaft.

EAST WHEAL RUSSELL.—J. Goldworthy, Aug. 21: Homersham's Shaft: In the 110 east the lode east and west of cross-cut is 3 feet wide, composed of quartz, prian, peach, gossan, &c., and carrying a leader of rich ore from 6 to 8 in. wide, a kindly lode. The lode in John's winze, sinking below the 100, is improved, and produces 1½ ton of good ore per m. The lode in the 100, east of Davis's cross-cut, is 4 feet wide, with a leader of rich ore from 3 to 4 in. wide, a kindly lode. The 100, west of Davis's cross-cut, is being communicated with the south drainage, this being a part of the south lode which went off north. The stop in the back of the 100, east of Oats's No. 1 winze, is worth 12l. per m.; the stop in the back of the 100, west of Oats's No. 2 winze, is worth 15l. per m. The stop in bottom of the 88, east of Benney's winze, is worth 14l. per m. In the 88, west of Hitchens's shaft, the lode is large, and of a kindly appearance. The lode in the 88 east is opening wider, and showing a kindly appearance. In the 66 east the part of the lode being carried is composed of capel, mundle, peach, and rich stones of yellow copper ore, a kindly-looking lode.

FURBISH.—J. Hampton, J. P. Daw, Aug. 21: The 21 west is not yet recovered the influence of the side, but is in good way, and will soon improve without doubt; it is more wet, and draining the level above; we have re-set it at 8l. per m. The 11, east and west, are much of the same value as for some time past. The whole of the places together, however, at present are yielding sufficient ore to pay cost. We expect to sample at the end of this month 25 tons, if not more, worth 5l. per ton, and there will be several tons left out, not being able to dress all the ore in time for sampling this month. We shall, however, increase the dressing pare.

FOWEY CONSOLS.—F. Puckey, S. Sampson, W. Ople, Aug. 19: We have a little improvement in the 60 east, on a lode north of Pedler's shaft; the lode in the end is 1½ ft. wide, and will yield 1½ ton of ore per m., worth 10l. per ton. We have commenced driving a level below this level, about 40 fms. behind the present end, where the lode is now 1 ft. wide, and will yield 1 ton of ore per m., worth 10l. per ton. We have no alteration to notice in any other part of the mine since our last report.

GARREG.—W. Sandoe, Aug. 21: In the 20, west of engine-shaft, the lode is 2 feet wide, of a very promising character, and is producing good dressing ore; it is likely we are just entering a run of ore ground here, and the new shaft, which we are now daily expecting to communicate with this level, will greatly aid us in exploring the new ground westward. In the 20, west of engine-shaft, on old lode, the lode is about 6 feet wide, producing saving work for dressing.

GAFTON COPPER.—G. Rowe, Aug. 17: We have continued the lode in the 36 west 3 ft., but not yet through it; and in consequence of so much water flowing therefrom it is not sufficiently laid open to describe its value; nevertheless, it is so far looking exceedingly kindly, being principally composed of spar, mixed with good quartz and yellow copper ore, showing every indication of leading to something of importance. The necessary preparations for getting the pitwork in a better condition shall have immediate attention. During the last few days we have placed the 50 ft. level end men to the rise in back of the 36, where the lode is worth 1½ ton of ore per m., and the ground easy for progress. The pitch in back of the 24 is worth 2 tons of ore per m. Other points of operation are without change.

GREAT CARADON.—F. H. Harper, Aug. 21: Our progress in driving both the cross-cuts at the 40 have been pretty favourable. In the end driving south we have just passed through another branch, composed of spar and mundle, letting out a little water. In the end driving west of the north cross-cut the lode is at present split into branches, from 2 to 6 in. wide, carrying mundle and peach, with spots of lead and copper ore. GREAT CRINIS.—W. Woolcock, Aug. 22: The new shaft is now down about 7 fathoms 5 feet below the 110, and the lode is rising to a well-defined wall, and the ground being favourable for sinking, the men are making good progress. We have still a promising lode in the 100 west. The north or leader part of the lode has recently made a splice from the point of which I have to-day broken some good stones of ore. This part is now 1 foot wide, and increasing in size as we open it out. We are carrying the lode fully 7 feet wide, with small branches running through on the south part of solid ore. I can assure you that I am anxiously looking forward to a great improvement here shortly. In the 100 cross-cut we have just passed through a small branch about 2 inches wide, chiefly mundle, with every indication of being near a lode, as the water flowing in a great deal more freely from the end than it did before intersecting the branch. The ground is not quite so favourable for progress as hitherto. The surface and all other operations are going on well.

GREAT RETALLACK.—W. H. Reynolds, Aug. 21: The ground in the shaft continues good, and we have still pretty much water; there is some lead in the shaft, but the part containing most lead is gone off east of the shaft, and we shall not be able to open on it until we reach the 45 ft. level, (say) in two or three weeks. No change in any other part of the mine.

GREAT TREGUNE CONSOLS.—Aug. 22: The lode in the 80 west retains its size and character as reported on last week, being composed of capel, impregnated with mundle, congealed quartz, flookan, oxide of iron, prian, and good quality copper ore. Water issues from the bottom, and the very freely, which seems to indicate some change ahead. We intend to put two men to cross-cut in the 60 next week.

GREAT WEST SETON.—H. Cowling, Aug. 20: The men continue to sink on the course of the engine-shaft, or what is thought to be the principal lode in this very valuable piece of mineral ground, and what is considered to be the north lode of the West Wheel Seton Mine. The lode in the sink is fully 6 ft. wide, composed of mundle, sugary quartz, blende, and yellow copper ore; a beautiful looking lode, and will, I do not doubt, produce an abundance of rich copper at a great depth. It should be known that our sink is in a deep valley, and the ground rises very fast on either side. Judging from the metalliferous character of the lode as seen in the sink, and the improvements it has shown in the last 6 ft. sinking, I verily believe that the 13 ft. level, now the bottom of the shaft, if driven would be found to be very productive; notwithstanding this, I would recommend sinking to the 20 before driving, which would not take up much time, the ground being soft and easy for penetrating. I have a large pile of good stone taken out from the buildings, and say that no time should be lost in erecting the engine-house and other buildings, so that we may get down in the ore at once. There is a great demand for shares in this mine by parties here in the neighbourhood, and adjoining parishes, who are competent to judge for themselves, and have frequently visited the mine of late.

GREAT WHEAL ALFRED.—Wm. Arthur, J. Delbridge, Aug. 17: Copper House Shaft: The lode in the 220 west is 3 ft. wide, and is not so rich as the 200 west; the lode is 3 ft. wide, of the same character as in the end. The lode in Moon's winze, in bottom of the 210 west, is 3 ft. wide, containing stones of ore in it, but not to value. The lode in the 210 west is 4 feet wide, worth 17l. per m.; we shall push on this end with all vigour, to drain the back. The lode in the new winze, in bottom of the 200 west, is 3 ft. wide, worth 8l. per m. According to the dip of the bunch of ore in Harvey's stop we have about 9 ft. more to sink to cut the main bunch of ore. The stop in back of the 220 west is worth 30l. per m. No. 1 stop, in bottom of the 210 west, is worth 20l. per m. No. 2 stop, in back of the 210 west, is worth 30l. per m.; No. 2, 21l.; No. 3, 19l.; No. 4, 16l.; No. 5, 20l.; No. 6, 20l.; No. 7, 21l.; No. 8, 31l. per m. We calculate to sample on the 27th inst. 350 tons of average quality copper ore, to pay cost and give a profit to the adventurers, and can repeat it for the next two months.

GREAT WHEAL BADDERN.—J. Hampton, J. Jenkin, Aug. 17: The ground in the cross-cut at Hill Brothers shaft is stiff, and much the same as we passed through in the shaft; there is more water issuing from the north end, which is a favourable indication; we continue to intersect branches of silver-lead ore, specimens of which we will forward in a day or two. We have set the cross-cut again at 200s. per m., and as soon as there is a discovery made we will let you know it. Landon's shaft is now sunk about 10 fms. from the engine-shaft, and is a beautiful winze, and the prospects are very cheering. We have erected a horse-whim, and shall lose no time in getting down to the lode, which we fully believe will be valuable. The railway tunnel has been suspended for some little time, but the back of the lode is laid open for 20 fms. in length, and it is of the most promising and best description; we have never seen such a thing fall from being good, which the shaft will prove in a short time. We send you specimens from the lode at this place also.

GREAT WHEAL BUSY.—J. Delbridge, J. Bryant, Aug. 17: In the 120, east of Oford, the lode is 3½ feet wide, spotted with ore, not much to value. In the rise in the lode, the lode is poor. In the 110, east of Oford, the lode is 5 feet wide, yielding a good quantity of mundle to value, about 10l. per m. The 100, east of ditto, is worth 12 tons per m. The No. 1 winze, in the 100, is worth 12 tons per m.; No. 2 winze is worth 12 tons per m. Levett's winze, in the 90, is worth 12 tons per fathom. Kiteley's winze, in the 90, is worth 15 tons per m. The 90, east of Mathew's, is worth 5 tons per m. Mathew's shaft is worth 10 tons per fathom. In the 80 east a little tin. Myle's bottoms are worth 12 tons per fathom. At Walker's shaft we are securing the collar, and preparing the level to clear the same from the 36. In the 80 rise, against King's, no change. In the 70 cross-cut north the ground is favourable. At Boscawen's we are fixing the machinery with all speed; also preparing the shaft for the pitwork, and clearing the adits and shafts from surface. Our machinery is working well, and at present we have a little tin in the end.

GREAT WHEAL FORTUNE.—J. Daniel, R. Pryor, J. Hoskins, Aug. 21: The 68 and 58, west of Hoskins's, are improved; in the former the lode is 5 feet wide, worth 20l. per fathom; in the latter the lode is 3½ feet wide, worth 50l. per fathom. The 58 is full 40 fathoms beyond the 68, in which latter level further improvement is shortly expected. Other points have not changed since our last week's report.

GREAT WHEAL MARTHA.—H. Rickard, Aug. 21: Our progress in sinking the engine-shaft below the 40 is equally as good as when last reported; we have intersected a small branch or dropper, underlying south towards the lode, composed of prian, soft spar, mundle, and spots of ore; these are very favourable indications for deeper levels, 120 are regarded much for making a productive lode. No other change to notice in the pitwork bargains. The tribute department is much as usual—looking well. We set the crusher to work yesterday, which performed its work in good style. We are busily engaged in fixing poppet-heads, and the incline road to take the ore from the dressing-floors to crusher; when completed we shall commence rapidly for a good sampling.

GREAT WHEAL VOR.—T. Gill, S. Harris, F. Francis, Aug. 21: We have commenced to drive the 152, east of Metal engine-shaft, for the purpose of intersecting the lode and exploring it. In the 142, driving east of Metal engine-shaft, on south part, the lode is 3 ft. wide, worth 30l. per m. In the 142, driving east, on the north part of the lode, the lode is 2 ft. wide, yielding good stones of tin ore. In the 142, driving east of Metal engine-shaft, the lode is 4½ ft. wide, worth 45l. per m. In the 142, driving east of Metal engine-shaft, the lode is 2 ft. wide, yielding a little tin, but not sufficient to value, looking promising to improve. In the 132, driving west of Metal engine-shaft, the lode is about 1½ ft. wide, producing a little tin, but not sufficient to value; our stopes in the 132 are looking very well. All the other parts of the mine are looking much the same as last reported.

GURLYN.—J. Curtis, W. W. Martyn, J. Reece, Aug. 21: The 60, east and west of engine-shaft, is not looking as well as last reported on. The 40 west, on Richer's lode, is looking better for tin, and opening fair tribute ground. There is no change to notice in either of the points since our last report.

WYDREY PARK.—Capt. Smith, Aug. 21: We have taken down the lode in the deep adit this week, which is about 2 ft. wide; it has very much improved since last reported on, and looking well at present.

HAWKMOOR.—J. Richards, J. T. Phillips, August 20: The lode in the 25, east of Rowe's rise, continues a good course of ore, and is worth full 3 tons of copper ore per m. HERWARD UNITED.—Aug. 22: We have not reached the old Pant-y-Pydwel vein with the 55 yard level, west of Dunford's shaft. We have some change in the ground, but not enough to prove that we are in the vein, so we shall drive a few yards more west. The 90 yard level, on the new vein, is promising well, and we expect a better improvement every day. Parry's stop, below the 80 yard level, east of Dunford's, appears a deal better than it was a few days since. All the tributaries are going on as usual.

HUCKWORTHY BRIDGE.—H. Rodde, Aug. 21: In the engine-shaft, sinking below the 25, the lode is 2½ feet wide, producing a deal of mundle, and occasional stones of copper ore. In the 25 east the lode is about 9 inches wide, at present unproductive. I think it would be advisable to drive a cross-cut south at the 25 east to cut the middle lode. All the old workings appear to have been confined on that lode towards the great cross-course.

KELLY BRAY.—S. James, Aug. 17: The lode in the 70 ft. level end east of eastern mine, is gradually improving as we proceed eastward; it is now 1 ft. wide, composed of quartz, blende, and rich stones of copper ore, and water is strongly oozing from the end, which we consider is good, the lode being a good one, and worth 20l. per m. The lode in the winze in bottom of the 60 is 2 ft. wide, worth 20l. per m. for the length of the winze, 2 fms. long. We drew a pile of work from there yesterday; there will be a mine found eastward yet. As regards the western mine, my opinion is the same as it has been for some time past, that is to save all the cost that possibly can be done in the western mine, for the reason, you are well aware, that we had good bunches of ore west under the gossan, and on the top of the hard channel of ground, which is proved to be upwards of 100 fms. thick; now we have got through and under this in the eastern mine, where there is every chance of good results to accrue, but that care must be taken as to the operations in the western mine I am well aware.

LADY BERTHA.—Capt. Harper and Metherell, Aug. 22: The 53, both east and west, present much the same appearance as for some time past; the lode in the former producing some good stones of ore, and in the latter the ground is easy for driving. In the 41 east the lode in the stopes east of Odger's rise is large, composed of peach, mundle, and ore, worth of the latter 5 tons, or 25l. per fathom. In the 41 east no lode has been taken down this week. In the 30 east we are cutting through the lode, and find it large, over 7 ft. wide, composed of peach, mundle, spar, and ore; we expect an improvement here shortly. The stopes in the back of this level are composed of ore and mundle, worth of the former 5 tons, or 20l. per m. Also, in the bottom of this level the lode is worth 3 tons, or 8l. per m. In the 10 east the lode is looking a little more encouraging than it did last week, being about 5 ft. wide, composed of mundle, quartz, and yellow copper ore, coated with green carbonate, good saving work. No change in the tribute department.

LONG RAKE.—F. Evans, Aug. 21: The 48 east will produce about 1 ton per m.; the lode is 3 feet wide, and of a promising character; a great deal of water is coming from it, and I think the trench before us, in the bottom of the 44, will soon be dry. The lode in the 48 west is 1½ feet wide, principally made up of spar, and showing cubes of lead; the ground about it is more promising, and the appearances are encouraging for lead. The shaftmen are making fair progress, and will sink faster after the clatern is fixed in the 48, which will be immediately attended to. We have commenced dressing the tributaries' lead from the mine.—P. Will Melyn: The men here having finished their bargain, clearing up days, &c., have taken to raise lead at 5l. per ton; we shall commence dressing in a day or two, &c., by next report shall be able to state particulars, and its value. Everything connected with the mine is making good progress.

LOWER PARK.—W. Davies, Aug. 21: Paddock Shaft: The 20 yard level is very easy for driving, and looks very promising for ore. The office shaft is going down very speedy; the ground is very favourable for driving. The rest of the mine is without alteration.

MAUDLIN.—W. Tregay, John Tregay, Aug. 17: The water is now down 2 fms. be-

low the 38, and if the forking continues the men will be set to drive the 38, on the north part of the lode, on Monday morning.—South Mine: The branches in the end are again intersected by another cross-course, which is not yet driven through. The lode in the rise in back of the adit is poor, and not so promising as when the rise was commenced; this rise will be discontinued.

MERLILYN.—W. Sandoe, Aug. 21: The new shaft is now down about 7 fms. below the adit level, and the ground, which is a light limestone, continues favourable for sinking, with scarcely any water; therefore our progress is satisfactory. The lode in the stopes in bottom of the adit is 1½ ft. wide, producing fine stones, with also a mixture of lead ore, and looking promising. In the 20, going east from new shaft, the ground has become more hard during the past few days. There is now in the end a mixture of carbonate of lime, chert, &c., with here and there strong spots of lead ore. From present appearances, I judge we are near the north and south lode.

MICHELL.—W. Sandoe, Aug. 21: The north part of the lode, on which both our ends are driving east and west from bottom of the new shaft, is about 2 ft. wide, composed of carbonate of lime and chain of a light colour, with also spots of lead ore, sulphur, &c., altogether presenting a kindly appearance. I expect the lode, which is now at this point divided by a horse, will fall together again a few fathoms further west, and undoubtedly make a deposit of ore. The new trial shaft, which is now in course of sinking 20 fms. or 30 fms. further west, is down about 3 fms. below surface. Here the lode is highly promising, and producing fine stones of lead ore.

MOLLAND.—T. Bennetts, Aug. 21: During the past week the lode in the 32 east, home to a cross-head we have just met with, produced saving work; but beyond this head, as far as seen, it is poor, being about 2½ feet wide, composed principally of white iron, with a little quartz, spotted with ore. In the country, however, there are two or three small veins of ore dipping towards the lode, which may have a favourable influence on it when united. The lode in the 20 east is small and unproductive at present, not yet out of the influence of the small slide referred to in my last. The ground here, as well as in the 32 east, is very heavy, and requires to be carefully timbered. The stopes in the bottom of this level are producing 1½ ton of ore per fathom. The lode at the bottom of the stopes, for 6 feet high or more, is smaller than last week, and hence it is not producing quite so much ore.

NEW BIRCH TOR AND VITIFER.—Captains Lean and Symonds, Aug. 19: Ham-bie's Shaft: In the 24 west no lode has been taken down since last report. In the 1 east the ground has lately become more settled; the lode is 18 in. wide, producing stones of tin, this is a very kindly lode. In the 12 west the ground is still very unsettled, and the lode consequently much disordered, but from indications we think the lode and the ground are becoming more settled. The pitches in this part of the mine are much the same as last report, on the whole producing good work.—Lance's Shaft: The lode in this shaft is producing stones of tin, but not looking so well as it has done.—Deep Adit West: The lode here is tiny, laying open tribute ground.—Deep Adit East: No lode taken down at late. The pitches here are about the same as last report. The airshaft is cleared down to the depth of 20 fms. under surface; the lode is about 18 in. wide, producing stones of tin, and we shall immediately resume the sinking of this shaft to the deep adit level. We believe, from the appearance of the old workings in this part of the mine, the ancient mine must have raised great quantities of tin, and from which fact we expect great results when the ground is further laid open.

NORTH BASSET.—T. Glanville, G. Davey, Aug. 16: The flat-rods shaft, to sink below the 142, by nine men, at 40l. per m.; the lode is 2 feet wide, producing good stones of copper ore. The 142, to drive east of the flat-rods shaft, by four men, at 9l. 10s. per m. The 132, to drive west on the tin lode, by four men, at 16l. per fathom; the lode is worth 10l. per m. The 122, to drive east of the cross-cut, by four men, at 10l. per m. The 102, to drive west of Lyle's shaft, by six men, at 20l. per m. Grace's shaft to sink under the 92, by six men, at 12l. per m.; the lode is 2½ feet wide, yielding 1 ton of ore per m. The 92, to drive east, by two men, at 5l. per m. The 92, to drive west, by four men, at 5l. per m.; the lode is 2 feet wide, composed of spar and stones of copper ore. The 82 cross-cut, to drive south, by four men, at 30l. per m. The 82, to drive west by four men, at 5l. per m.; lode yielding 1 ton of ore per m. The winze to sink under the 72, by four men, at 10l. per m. The 62, to drive west, by two men, at 9l. per m. The 52 cross-cut to drive north of Grace's shaft, by four men, at 15l. per m. The 42, to drive east of the cross-cut, by four men, at 8l. per m. The winze to sink below the 30, by four men, at 6l. 10s. per fathom; the lode is 1 foot wide, producing 1 ton of ore per fathom.

NORTH BULLER.—J. B. Delbridge, Aug. 17: In the 78, west of the engine-shaft, the lode is from 10 to 12 inches wide, with good stones of tin, and ground favourable for driving. In the 42, east of the flat-rods shaft, the lode is from 12 to 18 inches wide, with good spots of black and grey copper ore, and ground favourable for sinking. In the 42 east the lode is from 12 to 15 inches wide, spotted with black and yellow copper—ground favourable. In the 42 west the lode is small; the ground favourable for driving. I think we are near the cross-course in this end. Our engine and flat-rods are all working well.

NORTH DOLCOATH.—J. Pauli, Aug. 21: The lode in the 20 east is principally composed of fluor and sugar-spar, except in the bottom of the end, where it is, for about 1 ft. in height, composed of rich yellow copper ore, coated with black and white iron, rich looking stuff, and letting out much water; it is a very pretty looking lode, though at present not so rich as the lode in the 12 west, which is 2 feet wide, composed of spar and stones of copper ore, and occasional good stones of copper ore upwards in the end as well; as it is at present about estimate it to be worth 6l. per m.—driving at 2l. 5s. per m., and were the end to become ore from bottom to back, as it is for some distance from the bottom, it would be worth 30l. per m.

NORTH GREAT WORK.—J. Pope, Aug. 15: In the section of the south lode the ground removed to the east of Lloyd's shaft was worked by the old timers that taken away to the east of Thomas's shaft by the present company. The lode in the 18, east of Lloyd's shaft, is 1½ feet wide, producing spar, peach, mundle, copper ore, and some good stones of tin. I should think from the present appearance of the lode that we shall have a good course of tin before we reach Thomas's shaft, and I do not see why we shall not have as good a lode for tin east of the shaft as we had at the deep adit.—J. Pope, Aug. 20: The lode in the 10, east of Lloyd's shaft, is 20 inches wide, of just the same character as when I last wrote you—a very kindly lode. The lode in Thomas's shaft, sinking below the deep adit, is 9 inches wide, producing copper ore, mundle, and saving work for tin.

NORTH JANE.—C. R. Webb, S. Sims, Aug. 22: Kerr's shaft, sinking by eight men, at 11l. 10s. per fathom, is now down 5 fathoms below the deep adit level, and we hope to sink the same 5 fathoms deeper in about six weeks from this date, where we shall have

of ore per fathom. The lode in the bottom of the 44 is 2 ft. wide, and will yield 1½ ton of ore per fathom. In the 34, west of Kendall's shaft, we have intersected a cross-course, which has the lode, but we have commenced driving south to cut the lode west of the cross-course. In the 54 ft. level cross-cut south the ground is still favorable for driving.

PROSPER UNITED.—W. H. Martin, Aug. 22: At Louisa's engine-shaft the water is drained 16 ft. below the 30, and the shaft cut down to it within 4 fms. We have been into the 30 both east and west, but could not proceed to the extent it has been driven, in consequence of an accumulation of stuff deposited there by the tributaries in the late working; still the level, as far as it has been seen, is in a good state. The lode in the back is from 4 to 6 ft. wide, having a very fine appearance. As soon as the wheel-shaft, which was sunk on the course of the lode, is ready for drawing, which will be in the course of a few days, we shall at once begin to clear it out. At Hosking's the water is drained 2 fms. below the 20, and the shaft cut down to this level. The summen are engaged cutting ground for plunger-lift, and until the lifts in both shafts are fixed we shall not be able to drain the mine below the present depth. Marchion's lode at the new shaft, which is sunk about 15 fms. from surface, is at present 1 ft. wide, composed of quartz, muddle, and black and yellow copper ore, but not enough to value. The drainage of the mines so far has been attended with complete success, and the engines continue to work exceedingly well. The winding-engines and steam-capstans are being got on with as fast as possible.

PROVIDENCE.—Wm. Hollow, August 21: Higley's Shaft: No. 3 carbons is worth 25¢ per fm. No. 4 carbons is worth 20¢ per fm. The stope in bottom of the 75 east is worth 12¢ per fm. No. 5 carbons is worth 10¢ per fm. The 65 east is at present considered by a cross-course, but this we think is only temporary. No. 1 stope in the bottom is worth 80¢ per fm. No. 2 stope in the bottom is worth 50¢ per fm. No. 3 stope in the bottom is worth 40¢ per fm. There is no change to notice since last report. The following is an abstract of our settings on Friday last:—86 men on tribute, at 9s. 6d. in 14; and 72 men on tutwork.

REDMOOR.—T. Taylor, Aug. 19: During the past month we have driven the 40 west, on Johnson's lode, 3 fms. 2 ft. 10 in. without reaching the cross-course; throughout this drive the lode has improved, and is now yielding good saving work; we are now putting in air-pipes in this level, which will greatly assist us in driving, set to four men, at 5¢ per fm. In the 70 west we have driven 3 fms. 2 ft. 10 in. the lode is about 3 ft. wide, of a very promising character, and worth about 8¢ per fm.; the men have not finished taking down the lode, therefore we did not set the end. In the 80 west we have driven 2 fms. 3 ft. 3 in.; throughout this drive the lode is worth about 7¢ per fm.; we have put six men in this end to push it to the last cross-course intersected in the 70, that we may run through for ventilation, and open tribute ground.—Tribute: The 80 to four men, at 10s.; two men at 11s.; two men at 12s. The 70 to two men, at 9s. 6d.; two men at 12s. The 60 to four men, at 10s. in 14 ft. in.

RHOSWYDOL AND RACHEIDON.—Aug. 19: The 15 has been driven 4 fms. 3 ft. 6 in. further west along the lode; the latter continued of a large size, but did not contain much lead ore; however, it shows no favorable symptoms as we desire on. That favorable character has continued to improve, until I am now in a position to say we have a very fine ore lode in the end; it yields about 25 cwt. of lead ore per fm.; it is more collected together, and more solid than any part yet driven on, from engine-shaft west; there is no deception in it, as we have already opened from 9 to 12 ft. on it, and it bears out the expectations expressed in my report of July 31—more ore ground ahead. In the backs of the 15 west 1 fm. 0 ft. 3 in. has been risen, and 17 fms. 3 ft. 11 in. of ore ground broken, yielding from 10 to 25 cwt. of ore per fm. On the side of the 15 fm. level cross-cut 6 fms. 0 ft. 6 in. of ground was stoped on the side of the level; I must call it ore ground, but not sufficiently rich to place any value on it. In the extreme end of the 15 fm. level cross-cut 1 fm. 2 ft. 3 in. was driven east, and 1 fm. 4 ft. west on the south lode. The western drive continued poor, the eastern produced some nice stones of lead ore and blende. The eastern end has still a promising appearance. In the 10 fm. level 1 fm. has been risen in the back, and 8 fms. 4 ft. of ore ground stoped, yielding on an average full 20 cwt. per fm. In the side of the stope in back of the 70 14 fms. 4 ft. of ore ground was broken; the lode continues of a large size; the whole ground broken, however, for this month averaged about 10 cwt. per fm. The winze sinking on the end of the 65 had been holed through at the end of the month, and since then has been communicated through to the 70, ventilating that level effectually, and opening up a large piece of ore ground. In back of the 50 east 2 fms. 5 ft. 2 in. of ore ground was broken, and produced from 15 to 20 cwt. per fm. The winzen are continued to work efficiently, both pumping and drawing. During July the stuff brought out did not turn out so well as I have seen it. There is, however, a general improvement in the quality of the stuff throughout the mine. We had a week's stoppage in the crushing. In that interval we took down the top gable, end of wall of horse, as it suddenly gave way, and rebuilt it, and also changed roller-shaft. By the end of next month we shall make up for lost time, as we have such a good supply of water at present, and by next spring tides I shall send off a small cargo of ore.

RHIDEN.—R. Sines, Aug. 21: We are at this time getting some splendid copper from the stope in the bottom of the 62, west of Gilbert's shaft, and all being well I hope shortly to have a nice parcel for sale.

ROSEWALL HILL AND RANSOM UNITED.—E. Thomas, Aug. 20: All the necessary preparations for sinking the Ransom engine-shaft are completed, and the said shaft sunk 6 ft. below the 110, the lode in which has a promising appearance, and worth 7¢ per fm.; the lode in the end, west of the Troan, at this level, is from 4 to 5 feet wide, and much the same in value as when last reported, 30¢ per fathom; the lode in the end, east of shaft, is worth 6¢ per fm. The lode in the winze below the 100, west of the Troan, is now worth 15¢ per fm. The lode in the 80 east is worth 7¢ per fm. The lode in the 70 east is worth 8¢ per fm.

ROSEWARNE CONSOLS.—Jas. Richards, Aug. 20: In the 20, driving east on the counter, the lode is 1½ ft. wide, worth 4¢ per fm. No. 1 stope, in the back of the level, behind the end, is not looking quite as well as it did last week. The winzen are continued to work to-day. We have holed Ellen's shaft; lode 1 ft. wide—poor. The 40, east of sump, is driven 4 fms.; lode 1½ ft. wide—poor. The 40, east of sump, is driven 5 fms. 2 ft., with stones of ore. Nothing new in any other part of the mine.

ROSEWARNE UNITED.—H. Woolcock, Aug. 22: In the 90, west of footway, the lode is 2½ ft. wide, unproductive. In the 90, east of Jennings's, the men are rising; the lode is 18 in. wide, worth 3¢ per fm. In the 80, west of footway, the lode is 2 ft. wide, producing a little ore. In the 80, east of Jennings's, the lode is 2½ feet wide, producing stones of ore. In the 74, at Richards's, the men are driving south to cut the lode. In the 58, west of Richards's, the lode is 15 in. wide, containing a little ore. In the 46, east of Lane's, the lode is at present disordered by reason of a small cross-course. In the winze sinking below the 46, west of Richards's, the lode is 2 ft. wide, at present unproductive. In the 34, west of Bush shaft, the lode is 2½ ft. wide, producing a little ore. In the 34, east of Lane's, the lode is 2 ft. wide, producing a little tin, but not sufficient to value. At Wellington shaft, sinking below the 22, the lode is 2½ feet wide, with a very promising appearance, and producing stones of copper and tin ores. Our tribute department continues to look very well.

ROUND HILL.—R. Waters, Aug. 21: The lode in the 62 end, driving north of No. 2 winze, north of engine-shaft, is in two parts, each of which is producing a little ore, but not to value. The stope in back of the 15, north and south, of said winze, will yield 1 ton of lead ore per fm.; the stope in back of the same level, south of No. 1 winze, will yield 1 ton of ore per fm. The stope in back of the 50, south of middle winze, north of shaft, will yield 10 cwt. of ore per fm. The stope in back of the 40, over said winze, is for the present suspended. The tributaries are getting fair wages. We shall commence to send in our last parcel of ore, sold to Messrs. Newton, Reates, and Co., to-morrow.

SIGFORD CONSOLS.—Wm. Hosking, Aug. 21: The adit end, driving east on the north copper lode, is looking more promising, yielding some fine stones of copper, with a prospect of further improvement. The shaft sinking upon this lode is down about 7 fms. from surface; the lode has also been improved, some good stones of copper having been broken therefrom to-day. No alteration has taken place in the 24, driving west of engine-shaft, since last reported on.

SMITH'S WOOD.—W. Hosking, Aug. 21: The walls of the wheel-pit are completed, and we are now about to commence erecting the wheel, stamps, &c. The ground for building the carpenter's shop, smithery, and store-room is levelled, and ready for the masons to commence operations, for which the fine weather is very favourable. Both the north and south tin lodes continue to maintain their character, producing good work for tin.

SORBRIDGE CONSOLS.—R. Jackson, Aug. 23: In the 74 cross-cut south we have intersected No. 2 south lode, the lode is 1 ft. wide, yielding good stones of ore. In the 62 west the lode is 2 ft. wide, yielding a little ore. In May's rise, in the back of the 50, on the south part of the main lode, no lode has been taken down. In the 50, driving south, west of Crew's cross-cut, and west of the eastern cross-course, no lode has been taken down this last week. In the 50, west of Mayne's cross-cut, on No. 2 south lode, the lode is small and unproductive. In Blanchard's shaft, in the bottom of the 40, the lode is worth 1 ton of ore per fm. In Rowe's stope, in the back of the 40, the lode is worth 2 tons of ore per fm. In Lawry's rise, in the back of the 30, no lode has been taken down this last week. There is no change to notice in any other part of the mine.

SOUTH BRYN GWIG.—August 20: The lode in the level east is still producing good stones of ore, and much easier to drive. Dunsford's shaft is continuing rather hard to be sunk, and the limestone dark in colour.

SOUTH CARADON WHEAL HOOPER.—Wm. C. Cook, Aug. 16: The lode in the 62 west is much improved, being worth about 8¢ per fm. for copper ore; the character of the lode is very different from that of the last improvement, being very rough, so much so that we can see 3 or 4 ft. ahead; before we opened the vein the water was pouring from every fissure, but at the present time the upper part of the end is quite dry, indicates a large and loose lode underneath. I regard these changes in the lode, and the ground which is much easier for driving, as being the most important we have ever had. The end at the present time would let at 8¢ per fm. The lode in the shaft is a little larger. The 47 cross-cut is harder. We have no change in the winze.

SOUTH CONDURROW.—J. Vivian, W. Thomas, Aug. 17: The engine-shaft is now down to the 40, and the said level set to drive east and west. In the western end the lode is 2½ ft. wide, composed of gossan, spar, and malicaceous copper. In the eastern end the lode is 2 ft. wide, composed of gossan, spar, and muddle. The western end is set at 3¢, and the eastern at 4¢ per fm., to six men and three boys. In the 15 east the lode has improved in appearance, and is now 3 ft. wide, composed of gossan, spar, and muddle, impregnated with copper ore, and set to two men and two boys, at 27, 10s. per fm. In the adit west the lode is 4 ft. wide, composed principally of peat, containing a little tin, set to two men and two boys, at 4¢, 15s. per fm. In the adit end, east of Thomas's shaft, the lode is 2 ft. wide, unproductive, set to three men and three boys, at 37, 15s. per fm. The adit, west of cross-course, is driving on a south lode, which is 4 ft. wide, composed of peat, with a little spar. We expect to resume sinking the engine-shaft in about one month.

SOUTH GRENVILLE.—E. Chegwin, Aug. 20: In the flat-rod shaft, sinking below the 105, the lode is 1½ ft. wide, producing good stones of copper ore. No lode taken down in the 105 east for the week. Our tribute pitches in the old mine are much as last reported.—South Mine: In the 51, east of cross-cut, on new south lode, the lode is 3 feet wide, producing good stones of tin and spots of copper ore. In the 51, west of cross-cut, on new south lode, the lode is 2½ ft. wide, producing stones of tin and stones of copper ore, but not to value. Our tribute pitch in the bottom of the 32, on the middle lode, is looking well.

SOUTH DOLCOATH AND CARNARTHEN CONSOLS.—Wm. Roberts, Aug. 21: In the 50 cross-cut north there is no alteration since last reported. In the adit, driving on the counter, the lode is about 1 foot wide, with a promising appearance. The stope in the back of the adit produces ½ ton of good ore per fm.

SOUTH TOLGUS.—Aug. 21: Our summen at Michell's engine-shaft are cutting since last reported. In the 130 west we have not done anything in sinking the shaft in the back of the 120 west we have holed to the winze sunk from the 110; this has given us good ventilation in this part of the mine. The two stope in the back of the 120 west each yields 3 tons of ore per fathom. The lode in the winze sinking in the bottom of the 120 west is unproductive. The lode in the 110 west is chiefly of the back of the 100 west is 1 foot wide, chiefly consisting of muddle. We have resumed the driving of the 90 and poor.—South Lode: The lode in the 120 east is 2 feet wide, and 65 west is small and poor.—South Lode: The lode in the 120 east is 2 feet wide, and 65 west is small and poor. No lode has been taken down in the 120 east since last reported. The lode in the winze sinking in the bottom of the 120 east is 18 in. wide—unproductive. In the 110 east the lode is 15 in. big, of soft spar and prun, and a little ore—

looking kindly. The same will apply to the 100 east. Two stope in the back of the 110 east each yields 1½ ton of ore per fathom. We have intersected the north lode in the 90 cross-cut, west of Michell's shaft, north from Youen's lode; the lode is 2 ft. wide, composed of peat, spar, and muddle—a strong, fine-looking lode, but is unproductive. —New South Lode: In the 78, west of the cross-cut, the lode is 1 ft. big—unproductive. —ST. DAY UNITED.—E. Ralph, Aug. 17: No change to notice in these mines since last report. Billing's shaft is sunk to the 164; we shall begin to drive both east and west at the 164 next week.

ST. IVES WHEAL ALLEN.—H. Taylor, Aug. 22: Roderic's Lode: In the 20, east of Louisa's shaft, the lode is 4 inches wide, worth 4¢ per fm.—Giesler's Lode: In the 50 west the lode is 2 ft. wide, worth 5¢ per fm. In the stope in the back of the 50 west the lode is 2 ft. wide, worth 6¢ per fm. In the stope in the bottom of the 50 east the lode is disordered by a change of ground; worth 5¢ per fm. In the stope in the bottom of the 30 east we have about 2½ ft. to reach the tin ground. We are getting about the steam-stamps as fast as possible.

TEES SIDE.—R. Bray, August 21: I set the Providence wheel to work on Monday afternoon, after changing the bucket, and this morning the water was 3 fms. above the 20 fathom level: it will take this week to drain the water to bottom of the shaft, after stopping four days and a half. The wheel is forking the water flat-rate.

TOLCARENE.—Aug. 21: The lode in Field's shaft is 2½ ft. wide, and worth 3 tons of good ore per fathom for the length of the shaft (12 feet). The lode in the 30 west yields 1 ton of ore per fathom. The 30 east is not looking quite so well as when last reported. In the 20 west the lode is 2 feet wide, composed of gossan and good stones of grey ore. In the 20 east the lode is 2 feet wide, of gossan and spar. The 10 east yields ½ ton of ore per fathom. The 20 east, the lode is 2 feet wide, worth 1 ton of ore per fathom.—Entire Lode: The stope in the back of the adit, west of cross-cut, is worth for tin 25¢ per fathom. We still continue to stop the back of the adit, west of the cross-cut; the lode is worth for tin about 25¢ per fathom. We have sampled 73 tons of ore.

TREFFRY CONSOLS.—J. Phillips, July 27: The east and west lode is laid open at surface, and several pits sunk on the back of it, about 6 feet deep, all showing good samples of lead; the lode is about 3 ft. wide, underlying south about 2 ft. per fathom, composed of gossan, sugar spar, prun, muddle, and lead. I was not a little surprised when on the mine last Thursday to see such rich samples of lead taken from these pits. I saw the gossan, worked, and there were rich stones of lead in it; the small was bruised, and proved to be a good sample of lead, such as rarely to be seen, especially at so shallow a depth. A shaft is commenced sinking to the 10, and a cross-cut will be driven to cut the lode at that level, and no doubt, from the richness of it at the surface, a good lode will be met with. There are several other lodes in the sett equally promising, one of which is a north and south lode. It evidently appears to me that great deposits of lead may be expected at a deeper level, more especially from such a beautiful stratum of ground, being a light blue killas, very like that of East Wheal Rose, the richest lead mine ever found in Cornwall.

TRELOWETH.—T. Richards, Aug. 22: In the engine-shaft, sinking below the 134, the lode is not so hard as formerly, and worth about 12¢ per fm. The 134 end, driving east, is worth 10¢ per fm. The 134 west is spotted with copper ore, but it does not improve so rapidly in value as might have been anticipated. The winze below the 124 west is worth 25¢ per fm. for copper ore. The sump-winze sinking under the 124 east is worth 20¢ per fm. The 124 end west is worth 12¢ per fm. The lode in the 124 end, driving east, contains a little ore. Other places are without alteration.

TRENCROM.—R. Hollow, F. Bennetts, Aug. 22: In the 100, east of Giesler's engine-shaft, the lode at present is disordered by the cross-course. In the 100, west of the engine-shaft, the lode is worth 3¢ per fathom. In the 90, east of the engine-shaft, the lode is worth 3¢, 10s. per fathom. In the 80, east of the engine-shaft, the lode is worth 3¢, 10s. per fathom. In the 80, west of the engine-shaft, the lode is worth 3¢, 10s. per fathom. In the 60 cross-cut, east of the engine-shaft, there is a lode intersected about 32 fathoms north of the engine lode. The cross-cut is driven on the cross-course, and the lode is not settled to give its value. In the 60 cross-cut south, on the cross-course, east of the engine-shaft, no change to notice. In the 40, east of the engine-shaft, the lode is worth 2¢ per fathom. In the 30, east of the engine-shaft, the lode is worth 1¢, 10s. per fathom. Hollow's shaft is sunk below the 10 fm. level 19½ fathoms; the lode is unproductive. In Michell's flat-rod shaft, sinking below the 20, the lode is worth 4¢, 10s. per fm. In the 20, east of flat-rod shaft, the lode is worth 4¢, 10s. per fm.

TREVENAN AND TREMENSEE.—J. Webb, Aug. 22: We have cleared 10 fms. east of engine-shaft on the bottom of the 170, and have a good tinny lode for that distance, but have not broken up any of the lode, and cannot report its worth as yet; we shall continue to clear further east. The lode in the 170 end west is worth 10¢ per fathom; driving by six men, at 4¢ per fm. The 150 is being cleared west, by six men, at 27s. 6d. per fm. We calculate to have several fathoms yet to clear to reach the whole ground. From the appearance of the lode in the 140 westward, the 150 and 170 will open out valuable tin ground. During the past month the mine has been opening out very satisfactorily. I have nothing new to report on the upper levels, where we have been getting the returns of tin from the old workers' refuse.

TREWEATHA.—J. Scoble, Aug. 20: The ground in the 30 cross-cut remains without alteration, still letting out a quantity of water. The lode in the 15 east is much the same as last week, producing saving work: the stope in the back of the 15 is worth 4 cwt. of lead per fm.

TRUMPET UNITED.—G. R. Odgers, Aug. 17: The lode in the engine-shaft is 6 or 7 in. wide, producing good tinny work; if we could save it it would be worth 5¢ per fathom. The lode in the winze sinking below the 15 east is 10 in. wide, worth about 3¢ per fm. The lode in the stope above the 15 east is worth about 2¢ per fm. The lode in the 15 west is 9 in. wide, producing very good work for tin, worth about 7¢ per fathom; this has improved, and as there is a small cross-course before it, we are expecting it will continue. There is no alteration in the flat-rod shaft.

UNITED MINES (Trevithick).—J. Tucker, Aug. 21: The sinking of the shaft will be completed by the 73 by this week, when the dividing and casing will be at once proceeded with, and I hope completed in another three days. There is no other material change in any part of the mine.

VALE OF TOWY.—W. Waters, T. Harvey, Aug. 20: Clay's shaftmen are making good progress in sinking below the 100, the lode in the present bottom being wide, composed of barytes, lime, and blende, with a good mixture of copper ore throughout; the lode is underlying much faster than of late, and will soon be all over the shaft. In the 100, driving north of shaft cross-cut, the lode is 4 to 5 feet wide, composed of sulphate of barytes, carbonate of lime, and blende, with spots of lead ore, but not to value. In the 100, driving south of cross-course, the lode is small and the ground hard and unproductive. In the 40, driving east of Field's shaft, the lode is 2½ ft. wide, composed of barytes and lumps of ore, of a promising character. In the 80, driving north of Clay's shaft, the lode is 4 to 5 feet wide, yielding saving work for lead ore. In the winze sinking below the 80, south of Field's shaft, the lode is 2½ feet wide—tribute ground. In the adit level, driving south of Nant's shaft, the lode is 2 feet wide, composed of barytes and gossan, but not to value for lead ore. Tribute department much as usual. We are busy getting up the tribute ore and preparing for the next sampling.

WENDRON CONSOLS.—J. Taylor, E. Jenkin, W. Johns, Aug. 21: At the engine-shaft six men are engaged taking down the lode standing south of the rise, which has been holed from 48 to the 35; the lode is 4 ft. wide, worth 15¢ per fathom; stopping by six men. Two men are engaged driving the 35, west of engine-shaft, and driving to the 70 of the lode, to expedite the hoing to the 25, coming east from Roberts's shaft. At Bal Dees the shaftmen are engaged rising towards the new shaft from the 35; this shaft is sunk 2 fathoms below the 25, and we expect in one month from this time to hole the shaft to the 35, when we shall sink an 18-in. lift in that level, to pump the water to surface. The 35 is driven east of Bal Dees 20 fms.; lode 3 ft. wide, worth 6¢ per fathom; driving by six men, at 4¢; the lode in the stope in back of this level is 3 ft. wide, worth 10¢ per fm.; stopping by four men, at 2¢. The lode in the stope in the 25, east of said shaft, is 2 ft. wide, worth 17¢ per fathom; stopping by four men, at 2¢, 10s. Hill's shaftmen are engaged driving the 80 west; lode 3 ft. wide, worth 20¢ per fm.; driving by six men. The 40 is being driven west of Field's shaft, on north lode, by four men, at 10s. in 14 ft. The 20 is being driven west, on north lode, by two men, at 1¢, 5s. per fm.; lode 1 ft. wide, worth 2¢ per fm. The tribute pitches in this part of the mine are yielding their usual quantity of tin. Bishop's shaftmen are engaged fixing lift, and will this week resume sinking below the 52; lode in the shaft 1½ ft. wide, worth 12¢ per fm., and will sink for 25¢. The engine lode, west of Bishop's shaft, in the 52, is 2 ft. wide, worth 7¢, 10s. per fm.; driving by four men, at 7¢. No. 1 stope in back of 62, east of shaft, is worth 15¢ per fm.; stopping by four men, at 2¢, 10s. No. 2 stope, in back of same level, is worth 12¢ per fm.; stopping by four men, at 2¢, 10s. The lode in the 42, east of said shaft, is 2 ft. wide, worth 12¢ per fm.; driving by four men, at 8¢. The masons are busily engaged building the house to receive the new 50-hp. cylinder engine at Bal Dees part of the mine. We are getting on satisfactorily in the tin-dressing department.

WENTNOR (Pantass).—T. Pierce, Aug. 21: The sinking of Grosvener shaft, as well as of the new shaft on the junction to catch the "Seven Stars," is progressing well, and without alteration in the character of the ground. As the string by the side of the lode in the 64 proves richest at the sole of the level, I have commenced to sink a winze thereupon; and I am pleased to say, not only that the ore holds down, but that it is a deal better below than in the ends.

WEST PASSET.—Wm. Roberts, Aug. 21: The 65, driving west, is improved; in it the lode is 3 ft. wide, producing 1½ ton of rich grey ore per fm. Other levels, &c., are much the same as last reported.

WEST DEVON CONSOLS.—G. Rowe, Aug. 22: Our progress in driving the 40 east during the past week has been very satisfactory; and although the ground has been a little harder for exploring, it still continues very congenial for the production of copper ore: from the improved character of the lode at this level already seen, we have every reason to expect satisfactory results in this direction. By the end of the present month the 40 will be sufficiently in advance to enable us to resume sinking the engine-shaft, in order to obtain a deeper level. We have no change to notice in the tribute department in the upper levels since last report. The engine and all its appendages are in excellent working condition.

WEST PAR CONSOLS.—J. Webb, Aug. 21: The engine-shaft is squared down to the bottom of the adit, and ready to sink below; the ground is a little tighter than it was upwards. We have not cut through the new tin lode in the adit end; it appears hard and large, and likely to make tin in depth. The engine on the old mine works well; the water is drained to the 30 fm. level, but is rather stubborn for going down, in consequence of such a wet season.

WEST SHARP TOR.—W. Richards, Aug. 19: The cross-cut in the 150 is extended into the 55-0 ft. 0 in., and no south wall in view as yet, although we expect to meet it every cut we make; the part now being cut into contains quartz and iron chiefly, with portions of grey ore. Morris's shaft is a little more than 10 fms. below the 150, and we hope if all things go on well to be able to commence to drive the 162 in three weeks from this time.

WEST SNAILBEACH.—J. Richards, Aug. 22: There is no alteration in the sinking of the engine-shaft since my last. The new discovery is just about the same as for the last day or two.

WEST WEDRON CONSOLS.—R. Kendall, J. Hore, Aug. 17: The engine-shaft is sunk this week 6 ft.; lode small. The flat-rod shaft is sunk 5 ft.; ground harder for sinking. No change in the adit levels this week.

WEST WHEAL JANE.—J. Tomkin, J. Smith, Aug. 17: Our setting has gone off to-day at a little less than our former prices. Our tin ground is still looking well, and but for the drop in the price of tin our returns of this ore would considerably increase. We shall have about 4 tons of black tin for sale in a short time from our stamps. In the 70, west of Tippet's shaft, the lode is 4 ft. wide, but of no value at present. In the 50 west the lode is worth 10¢ per fm. for tin. In the 30 west the lode is worth 12¢ per fathom for tin. In the 10, east of Painter's, the lode is worth 14¢ per fm. for tin. In the 10, west of Painter's, the lode is worth for muddle and tin 15¢ per fm. In Painter's shaft, 12 ft. long, the lode is worth 25¢ per fm. in depth. We hope to set twelve heads of stamps more to work next week. We expect to resume the working of our muddle ground in a short time.

WEST WHEAL MARGARET.—W. White, Aug. 20: The sinking of Hallett's shaft is still going on progressively; the lode is much the same as it was last week.

WEST WHEAL TOLGUS.—Aug. 21: North Lode: In the 50, west of Wheal Raveen shaft, the lode is 2½ ft. wide, composed of spar, peat, and stones of good ore. The lode in the 40 west is split into two parts, the back part is 15 in. big, and appears to be coming round to the south lode; the north part is 15 in. wide, of spar, peat, and stones of ore. This part of the lode is taking a better direction, and we believe it to be the main part of the lode.—South Lode: In the 65, west of Wheal Raveen shaft, the

lode is 2½ feet wide, of spar, peat, and saving work for copper ore, and has a very promising appearance. Taylor's shaftmen are making good progress in cutting down the shaft. The ground in the 65, 50, and 30 cross-cuts is just as it has been for some time past—moderately easy. Our tribute pitches are looking well.

WEST WHEAL TREVELLYAN.—John D. Osborn, Aug. 17: In the 58, driving west from Cator's, there has been no lode taken down this week, but next week we intend to cut through it, when we shall report its character. In the 45 west the lode is 2 ft. wide, occasionally producing good stones of ore. The stope in back of said level, west of No. 3 winze, are worth for ore 10¢ per fm. The stope east of No. 3 winze are worth 6¢ per fathom. No. 2 winze, sinking below the 48 fm. level, is sunk 7½ fms.; no lode taken down this week. In the two cross-cuts, driving north and south, there has been no change since last report.

WHEAL ANNE.—H. B. Gros, Aug. 20: Since your last meeting we have opened on Allen's lode 7 fms., which will average 7 feet wide; the north part of this lode for 4 ft. wide is producing fair stamps' work; the remaining 3 ft., on the south part, is good work for tin, worth from 6 to 7 cwt. per 100 sacks, or 10 tons of the lode in places, and from the old workings on the back of this lode we may consider that it will continue productive for a great distance. We have about 20 fms. more to lay down the tramway in the deep adit to this lode, which is from 12 to 14 ft. wide, producing saving work for tin, and is very speedy for taking away; with the advantage of the tramway to take away the lode as broken, any quantity will be available for the stamps. We have opened 14 fms. on the course of the north lode, which is 2 ft. wide, and worth 2 cwt. of tin per 100 sacks for the distance opened on; the lode in the end is at present disordered by a cross-course. Nothing has been done on the other lode for some time past, more than putting up a rise from the deep adit to the shallow adit, which is made available for taking the work direct to the stamps by transit of rail. Our surface operations have been pushed on with all possible speed, in order to get our stamps to work, which have been somewhat retarded, having had a bar of hard ground in the lobby to the wheel, which is now complete and secure for more than 200 fms. in length; we have had to launder and culvert near one-half of the distance, which has taken time and expense. We have also had to cut down ground in the deep adit for the tramway, which is now laid down for 150 fms. in length, and will be complete to the large lode in a few days, which will at once be opened on. I have also the pleasure of informing you that we have opened on a lode of the most promising character at the Nine Stones part, which is from 3 to 4 ft. wide, good work for tin, worth from samples I have this day tried 4 cwt. of tin per 100 sacks. We intend to put in an adit level on the course of this lode, which will be a good depth in a short distance driving, and good results may be fully anticipated therefrom. I assure you it gives me much pleasure to be able to say that the prospects are of the most charming character, and with the advantage of water-power for stamping a large quantity of work, and every other facility for working on a cheap scale, we cannot fail of being well rewarded for our outlay, and I hope in a short time to add another 12 heads to our stamps, and increase our returns to a very great extent, and leave us good profits; I assure you nothing shall be wanting on my part to realise it.

WHEAL AGAR.—Wm. Roberts, Aug. 21: In the 80 east the lode is 2 ft. wide, producing 1 ton of ore per fm. The 80 west produces stones of ore. In the winze sinking under the 80 the lode is 2 ft. wide, with stones of ore. In the 70 west the lode is 3 feet wide, producing stones of ore; the same will apply to the 60, driving west. The stope in back of the 80 continues to produce 4 tons of ore per fm.

WHEAL ARTHUR.—T. Carpenter, Aug. 19: The lode in the 50, going east, is very much improved; we have cut into it 4 ft., and not yet through the lode; so far as we have seen it is a distinct lode, to what the deep adit is driven on.

—T. Carpenter, Aug. 20: We have driven the 50 fathom level east of the boundary cross-course, on the course of the lode 22 fms.; the lode in the present end is 5 ft. wide, composed of spar, peat, muddle, and copper ore, worth of the latter 6¢ per fm. This is the same lode that Wheal Edward Company is raising upwards of 100 tons per month from. We are obliged to suspend this end until we make the communication with Hooper's rise. I have put six men to drive north from Hooper's rise, on the cross-course, and also six men to drive south, so as the communication shall be effected as soon as possible. The lode in Palmer's and Barley's stope, in back of adit west, is yielding about 1½ ton of ore per fathom each stope.

WHEAL CREBOR.—Capt. Gifford, Aug. 21: The 60 east is looking more promising than it has for many fathoms driving; the lode is increasing up to the back of the level in the end, which is now 2 feet wide, saving work; it is still, however, better in the bottom of the level, where we expect great improvement, when we commenced sinking the shaft again, which we shall do as soon as the 48 west has unwatered the old mine to that depth. In the rise in the back of the 60, to open tribute ground, the lode is 3 ft. wide, saving work, and we hope to hole to the 48 by the end of next month. No alteration in any other part of the mine.

WHEAL CUPID.—H. Pryor, Aug. 16: The 54 and 40 yield good stones of ore.

WHEAL EDWARD.—M. H. East, Aug. 17: In the 81 west we are driving by the side of the lode. In the rise in back of the 71 west the lode is worth 9 tons of ore per fathom for its length (12 feet). In the winze below the 61 west the lode is worth 3 tons of ore per fm. for length of winze (9 feet). In the 50 west the lode is improved, and worth at present 1 ton of good ore per fm. In the 40 east the lode is worth 1½ ton of ore per fm.; in the stope below this level the lode is worth 3 tons of ore per fm. In the 50 east the south cross-cut is extended 2 fms. 3 ft., and we have cut the

FOREIGN MINING, AND THE NEW TARIFFS—No. IV.

Information collected with regard to the coal production of the Valenciennes (Nord) coal basin shows that the extraction amounted in 1860 to 18,327,805 hectolitres, of which 17,045,705 hectolitres were available for commercial purposes, and sold for 21,192,150 frs. The number of pits in the district is 62, but three of these (two at Vieux-Condé, and one at Odomez) were not in operation in the year; 14,066 men were employed (11,648 below ground, and 2418 on the surface), and 99 steam-engines, of 4419-horse power, were used in the extraction of the product and for drainage and ventilating purposes. The number of horses employed on the surface and for traction purposes below was 785. The gross quantity of coal extracted was 18,327,805 hectolitres, but of this quantity 1,192,704 hectolitres were consumed on the spot either by the engines or workpeople, leaving the quantity available for sale as stated above—17,045,715 hectolitres. The largest share in this production is borne by the Compagnie d'Anzin, which had last year 36 pits in activity at Anzin, Raismes, Denain, Saint-Saulve, Vieux-Condé, Fresnes, and Odomez, employing 55 steam-engines, 8591 workmen, and 497 horses, and producing 9,792,681 hectolitres available for sale. We hope shortly to enter into similar details with respect to the basin of the Pas-de-Calais.

Some further particulars may be supplied with respect to the mineral industry of the province of Hainaut. Ironstone was raised last year from 32 workings open to the air, and 195 subterranean workings. The mean depths of the workings were 22 metres (or about 70 ft. English), and the quantity of ore raised amounted to 218,590 tons of rough minerals, and 146,345 tons of cleansed ditto, representing together a value of 1,290,300 frs. There existed at the same time in the province 387 quarries, having 414 workings in activity, of which 344 were open to the air and 70 were subterranean. The processes of extraction and drainage necessitated the employment of 108 steam-engines, of 1547-horse power; 619 horses and 9301 workmen were employed, and the value of the product was 9,729,870 frs. There are only three blast-furnaces in the province worked with charcoal, and these are all three "out." The number of furnaces worked with coke was 44, of which 25 were in activity, and they were served by 36 steam-engines of 1781-horse power, and 2282 workmen. The production of 1860 consisted of 46,490 tons of cast-iron, and 137,420 tons of refined iron, or 183,910 tons in all; the materials consumed having been 507,250 tons of minerals, 213,410 tons of limestone, and 242,600 tons of coke. The value of the product was 15,419,830 frs., of which 4,353,738 frs. referred to iron of the first-class, and 11,066,092 frs. to iron of the second-class mentioned. As regards the process of further refining and working up the *fonte* into marketable iron of various kinds, the number of refining-houses in use was 2, of forges 3, of puddling-works 152, of re-heating-works 68, of great hammers or squeezers 28, of ordinary hammers 22, of shears 55, of rolling establishments for making rails 8, plates 6, &c. The number of steam-engines employed was 62, of 2273-horse power, and of water-wheels 45, of 627-horse power; 2851 men were also engaged. The consumption of raw iron was 132,030 tons, of charcoal 280 tons, and of coal 240,230 tons; and the production of marketable iron was 101,455 tons, value 18,337,700 frs. There was one establishment in activity for the fabrication of steel, employing 7 steam-engines, of 149-horse power, and 25 workmen, and producing 80 tons of steel, of the value of 108,000 frs.

The total value of the products of the mineral industry of Hainaut in all its branches—coals, ironstone, marble, stone, lime, iron, steel, glass, &c.—was estimated last year at 150,531,803 frs., being 7,271,247 frs. in excess of the corresponding total in 1859. This imposing result was, however, not attained—at any rate, so far as mining is concerned—without some very serious accidents, involving a total loss of 150 lives, being an excess of 15 over the number killed in 1859. Of a total of 137 accidents, 20 were caused by failures in the ropes or chains by which the miners descended or ascended (28 killed, 2 wounded); 5 by defective ladders (5 killed); 12 from other circumstances of a kindred character (13 killed, 3 wounded); 39 by falls of rock or coal (33 killed, 7 wounded); 11 by fire (*coup de feu grisou*)—23 killed, 18 wounded; 1 by inundation (1 killed); 2 by suffocation (2 killed); 23 by falls of rolling-wagons (19 killed, 40 wounded); and 17 from various other causes (18 killed, 3 wounded). The most frightful of these accidents occurred on Dec. 23 last, when a cage containing 10 men fell to the bottom of the St. Henri pits, in the Bayemont Colliery, at Marchiennes-au-Pont, the whole of the poor fellows being killed. Since this terrible disaster—although we in England can, unhappily, refer without much difficulty to still more awful casualties—the proprietors have provided a new machine, specially constructed for the purpose of enabling the miners to ascend and descend with it, it is to be hoped, greater safety.

M. Mahaux, an old director of collieries in the Charleroi district, has invented an apparatus for ventilating mines, which is said, among other merits, to possess a force only subordinate to the power of the motor, while rotary pumps are considered, on the contrary, to have attained the greatest development of which they are susceptible. The apparatus of M. Mahaux is very simple, easy of introduction, and inexpensive to maintain; but the estimate made by M. Mahaux of the cost, although exact, perhaps, for Charleroi, is not applicable to all localities, since the price of wood, masonry, and manual labour differs in each district. The price of the machines would thus vary considerably, but the calculations of M. Mahaux may serve as a basis on which other reasoning may be founded by those who desire to give the ventilator a trial. M. Jochams has given a succinct description of the apparatus in Vol. XV. of the "Annales des Travaux Publics," and has narrated the results of several experiments undertaken to test its power; but the machine has since been simplified and improved. The ventilator consists of two wooden vessels, in which two pistons move, each having four valves, the same number also existing at the bottom of the vessels. Between the two vessels a horizontal cylinder high-pressure steam-engine gives a direct up and down movement to the air-pistons, which meet at each end iron cross-bars fixed on wooden framing. The steam-piston opens the valves at the bottom of the vessels, or wooden vessels, and the air behind them can thus enter. On the steam-pistons retreating, and closing them, the valves in the air-pistons are opened, and the air enclosed in the vessels put in communication with the atmosphere. Air is thus made to circulate at a speed of 12 ft. or 15 ft. per second, the volume of air put in motion depending, of course, on the size of the machine. The cost of a machine capable of extracting and circulating 20 cubic metres of air per second with a vent of 2½ metres (about 8 ft. 4 in.) is estimated by M. Mahaux at 12,546 frs.

M. Grateau, mining engineer, in a note on the fabrication of iron at Halberg, near Saarbrücken, in Rhenish Prussia, where an excellent iron for carriage axles is produced, states that the return price at which 100 kilograms of small iron are made is 54 frs. 4 c.—that is to say, about 230 lbs. English, at 22. 5s. This high price is ascribed to the dearth of the iron produced by charcoal. The use of coke, which can be obtained at a reasonable price in the basin of Saarbrücken, would effect a considerable saving, and coal would secure a still greater economy; but the fabrication of axles being the object specially aimed at by the Halberg forge, its managers endeavour to secure an iron peculiarly adapted for that purpose, and the iron obtained by charcoal is considered preferable to that in the production of which coal has been used. The profit made is estimated at 2 frs. 89 c. per 100 kilograms on small irons; on large irons it is at least double. In contrast with these high rates maintained for a special and little-developed fabrication, it may be interesting to give the return of prices at which iron is produced at a large establishment some kilometres from Halberg, worked after the English fashion. This establishment of Nenekirchen comprises three blast-furnaces worked with coke, and the minerals employed are those of the surrounding district and the Duchy of Nassau. The mineral of Nassau gives a mean return of 48 per cent., and that of the Rhine 30 per cent., the real content of iron in these minerals being 5 or 6 per cent. higher. Cast *fonte*, for which the mineral of the country is alone employed, is produced at 10 frs. 94 c. per 100 kilos., and refined *fonte* at 13 frs. 41 c. per 100 kilos., giving a mean of 12 frs. 50 c. M. Grateau, taking these figures as a guide, calculates the cost of rough puddled iron at Nenekirchen at 16 frs. 31 c. per 100 kilograms; of small hammered iron at 21 frs. 71 c. per 100 kilograms; of large hammered iron at 21 frs. 59 c. per 100 kilograms; and of rails at 21 frs. 34 c. per 100 kilograms. The French and Prussian Governments, by a convention concluded in April, and the full and entire execution of which is ordered in a decree just issued by the Emperor Napoleon from Vichy, have determined on the construction of an international canal for the accommodation of the collieries of the Sarre district. The French Government engages to execute, between the canal from the Marne to the Rhine and the Prussian frontier, a canal commencing at the Vosges mountains, and ending at Sarreguemines; and the Prussian Government engages to prolong the work over its territory as far as Louisenthal, either by means of a canal by the side of the Sarre, or by rendering the Sarre itself navigable. A uni-

form tariff of dues is to be established between France and Prussia over the whole extent of the canal, and is to be determined by the two Governments at some future time. The works are to be pressed forward as rapidly as possible, and a mixed commission, composed of engineers selected from both countries, is to be charged with any technical questions which may arise during the prosecution of the undertaking, and especially the mode of prolonging the canal on the Prussian territory.

The Compagnie Franco-Serbe, which has established a line of bateaux on the Danube and the Save, is stated to have done so with success, each bateaux, including the days on which it has not been in use, having earned on the average between 144. and 155. per day since June 1. The coal mines of Dobra, on the shores of the Danube—part of the operations of the company—furnish coal suitable for the consumption of steam-ships. The coal is mixed with common descriptions, but burns nevertheless purely, and with a saving of 22 per cent. as compared with Austrian coal. A blast-furnace at Maidanpek is in operation; the *fonte* obtained is good, and several orders are in course of execution. A furnace for smelting copper was, at the date of the latest advices received in Paris, almost ready to be put in operation, and mines of copper were being worked. Pyrites of sulphur, containing 25 per cent. of sulphur, had been discovered; and as foreign sulphur is prohibited on the Danube, this will be a new source of profit, some having already been sold for 1200 frs. When some improvements now in progress have been effected, hopes are entertained that copper ore and mineral will be obtained to the value of first 12,000 frs., and eventually 20,000 frs. per month. Three bateaux, suitable for heavy merchandise and passengers, were to leave Marseilles on Saturday, Aug. 17, for the Danube. Seeing that the company was only put in possession of sufficient funds in May last to prosecute its operations with vigour, the progress which it has made is considered satisfactory. Time alone can show whether the undertaking is entitled to permanent approval.

The last advices from Liege state that the prices of coals, *fontes*, and irons, exhibit little change, the aspect of affairs being generally calm. This is not surprising, as the present is usually the quietest period of the year as regards coals, the consumption being confined to the current wants of local industries. In *fontes* a sale of 4,000,000 kilos. of refined has been made by the Société des hauts-fourneaux d'Ougrée. The demand for marketable irons is passable, and a satisfactory enquiry has been experienced for plates for France. The Antwerp metal market has also been calm, without change in prices.

BRAY'S TRACTION-ENGINE.—An influential company, the prospectus of which we publish in another column of this day's Journal, has just been formed for working the patent for traction-engines granted to Mr. Bray, and the directors consider that as the Act for reducing and regulating the tolls to be demanded for the use of traction-engines has been passed, the period has arrived when the business of the company may be extended with advantage to the shareholders and to the public. The company has received numerous testimonials from eminent engineers and Government officials, and have at present an order in hand for a machine for the permanent service of Woolwich Dockyard. It is found that in actual working the expense of the traction engine is little more than half that of horse labour, and when the work is not continuous the saving is much greater, as expense is incurred by the engine only when in use, whilst horses must be fed whether worked or not. From the prospectus, it will be seen that the Marquis of Breadalbane, the Marquis of Conyngham, the Earl of Caithness, and Lord Claude Hamilton have accepted office as honorary directors, and the ordinary board comprises many well-known names. The shares are 5l. each, and the limited liability principle has been chosen in the constitution of the company.

NEW MOTIVE-POWER ENGINE.—In an invention just patented by Mr. Newton, three stationary steam-tight cylindrical chambers are employed, the middle one being fitted with a turbine of any approved construction, mounted upon a vertical shaft, which turns in bearings carried by the cylinder head. This middle cylinder is connected to each of the side cylinders by means of two pipes, one of which (from each cylinder) enters the middle cylinder above the face of the turbine, and the other below the turbine. Each pipe is governed by a shutter-valve, the slats or shutters in the upper pipes opening inwards to the middle cylinder, while those in the lower pipes open to the side cylinders. These two side cylinders are connected at top by a branch steam-pipe leading from a boiler, and in the prolongation of these branches (within the cylinders) cut-off valves are mounted. By the axial motion of these valves the steam is cut off, and exhaust pipes brought into connection with the cylinders. The working of the valves is effected by annular floats, that are suspended in the cylinders from pendant rods, and which, by means of cranks and horizontal rods, are connected to arms keyed to the bottom of the valve spindles. To ensure the proper relative action of these valves, the upper ends of their spindles are connected together by means of short levers, which the carry, being coupled by an adjustable coupling-rod. A driving pulley is keyed to the turbine shaft for transmitting the rotary motion of that shaft to the mechanism to be driven by the engine.

India Office.

BY ORDER OF THE SECRETARY OF STATE FOR INDIA
IN COUNCIL, notice is hereby given that the DIRECTOR-GENERAL OF STORES FOR INDIA will be READY, on or before MONDAY, the 26th instant, to RECEIVE PROPOSALS in writing, sealed up, from such persons as may be willing to SUPPLY—
And that the conditions of the said contract may be had on application at the India Store Office, Cannon-row, Westminster, where the proposals are to be left any time before Two o'clock P.M. of the said 26th day of August, 1861, after which hour no tender will be received.
GERALD C. TALBOT, Director-General.
India Office, August 14, 1861.

FESTINIOG, NORTH WALES.—The LEASE of a SLATE QUARRY in the above locality is TO BE DISPOSED OF. It includes upwards of SIX HUNDRED ACRES of GROUND, and by three levels of 75, 50, and 30 yards respectively has been PROVED to have FOUR LARGE VEINS of SLATE ROCK of SLENDING QUALITY and COLOUR. The grounds afford unusual facilities for the development of the works, is situated within 1½ mile of the Festiniog and Portmadoc Railway, and is unquestionably a very valuable property. Want of capital is the cause of sale. All applications must be accompanied with a reference to a London bank, or they will not be attended to.—For particulars, apply to WM. DAVIES, Festiniog, via Carnarvon, North Wales.

THE COMMERCIAL UNION FIRE INSURANCE COMPANY.—The Directors have the pleasure to inform the subscribers for shares in this company that a DEFINITE OFFER has been MADE to them by ONE of the MOST INFLUENTIAL of the OLD ESTABLISHED INSURANCE OFFICES for an AMALGAMATION, upon terms which would give the shareholders in this company an immediate and highly remunerative dividend.

The proposal emanates from a company who agree with the directors of the Commercial Union in the expediency of the late serious changes of rates, and the impossibility of maintaining them. The directors will not complete any arrangements without the sanction of a meeting of the subscribers to this company.

HENRY W. PEEK, Chairman.
HENRY TROWER, Deputy-Chairman.

WALKER'S STAMPING MACHINES AND STEAM ENGINES, for REDUCING ALL KINDS of MINERAL ORES to IMPALPABLE POWDER, have been in use for these last ten years in all the leading mines of the United Kingdom and the Colonies of the British Empire; as have also the PATENT PUMPS and WATER LIFTS, and for economy of working and durability cannot be equalled. MANUFACTORY, 17, COWPER STREET, CITY ROAD, LONDON.

FIFTEEN to TWENTY, and even TWENTY-FIVE PER CENT. PER ANNUM upon current value of shares, in CORNISH TIN and COPPER MINES. Dividends payable two-monthly or quarterly.

MESSRS. TREDINNICK AND CO., MINING ENGINEERS, SEND their SELECTED LIST of SOUND PROGRESSIVE AND DIVIDEND SHARES upon the receipt of a Fee of One Guinea.

Maps of Cornish and Devon Mining Enterprise, 6s. per copy.
Plans per post of the Buller and Basset, Great Vor, Alfred Consols, the Providence and Margaret Districts, 2s. 6d. each.

Cornish Mines, well selected, pay better than any other description of securities, are freer from risks, and entail less responsibilities than banks and other joint-stock companies. Shares bought and sold on commission of 2½ per cent.

Money advanced at 10 per cent. annually, for short or long periods, upon approved Mining Shares.—78, Lombard-street, London, E.C.

BRITISH AND FOREIGN STOCK, RAILWAY, AND MINING SHARES BOUGHT AND SOLD. A considerable amount of money is locked up in mining shares not prominently before the public, and consequently difficult of sale. Messrs. FULLER AND CO., 26, CHANGE ALLEY, CORNHILL, LONDON, invite the holders of such stock to communicate with them, having channels for the purchase and sale of shares of every description, independent of the mining market.

FOR SPECIAL SALE:—Messrs. FULLER AND CO. have £6500 worth of shares on hand, paying regular dividends of from 12½ to 15 per cent. Also, £2750 worth of progressive shares, upon which from 300 to 300 per cent. profit may be realised in a few months, and perfectly free from risk. Full particulars may be had. Telegraphic messages promptly attended to. Bankers: Bank of England.

TO CAPITALISTS.—MESSRS. LEICESTER AND CO., INSPECTORS and VALUERS of MINES, &c., MELBOURNE, VICTORIA, OFFER THEIR SERVICES to SELECT and INVEST CAPITAL in MINING PROPERTIES, for which they charge 2½ per cent.; and they also COLLECT and TRANSFER the DIVIDENDS, charging 4½ per cent. on their amount. Messrs. LEICESTER AND CO. earnestly call the attention of capitalists to the many opportunities they possess of investing, to pay from £50 to £150 per cent. per annum. Sums under £50 will be charged extra. All remittances must be made through our agent, MR. RICHARD MORTON, Mining Journal Office, 26, Fleet-street, London; or direct through our bankers, the Union Bank of Australia.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, August 23, 1861.

COPPER.		IRON.		BRASS.	
Best selected	Per Ton	Best selected	Per Ton	Sheets	Per Ton
Tough cake	101 0 0	Do. to arrive	5 17 6	Wire	8 1/2 d. - 9 1/4 d.
Tile	98 0 0	Nail rods	7 0 0	Tubes	10 1/4 d. - 10 1/2 d.
Burna Burna	97 0 0	Starford, in London	7 0 0	FOREIGN STEEL.	
Copliapo	96 0 0	Bars, ditto	7 10 0 - 8 0 0	Per Ton.	
Copper wire	0 1 0 1/2	Floors, ditto	8 10 0	Swedish, in kegs (rolled)	14 10 0
ditto tubes	0 1 1 1/2	Sheets, single	9 0 0 - 9 10 0	(hammered)	14 10 0
Sheeting & bolts	0 0 11 1/2	Fig. No. 1, in Wales	3 0 0 - 4 0 0	Ditto, in faggots	15 10 0
Bottoms	0 1 0	Refined metal, ditto	4 0 0 - 5 0 0	English, Spring	18 0 0 - 23 0 0
Old (Exchange)	0 0 9 1/2	Bars, common, ditto	5 0 0	Bessemer's Engineers Tool	44 0 0
		Ditto, merchant, in Tees	5 10 0	Spindle	30 0 0
		Ditto, railway, in Wales	5 0 0 - 5 2 6	QUICKSILVER	7 0 0 p. bottle
		Ditto, Swed. in London	10 15 0 - 11 0 0	SPELTEN.	
		To arrive	11 0 0	Per Ton.	
		Fig. No. 1, in Clyde	2 8 0 - 2 10 0	Foreign	17 10 0
		Ditto, f.o.b. in Tees	—	To arrive	17 10 0
		Ditto, f.o.b. in Tees	—	ZINC.	
		Staffordshire Forge Pig	3 10 0 - 3 12 6	Per Ton.	
		Welsh Forge Pig	—	In sheets	24 0 0
				TIN.	
				Per Ton.	
				English, blocks	114 0 0
				Ditto, Bars (in barrels)	115 0 0
				Ditto, Refined	116 0 0
				Banca	114 10 0 - 115 0 0
				Straits	113 0 0
				TIN-PLATES.	
				Per Ton.	
				IC Charcoal, 1st qua. p. bx.	1 8 0 - 1 9 0
				IX Ditto 1st quality	1 14 0 - 1 15 0
				IX Ditto 2d quality	1 4 6 - 1 6 6
				IX Ditto 3d quality	1 11 0 - 1 13 0
				IX Coke	1 1 6 - 1 2 6
				IX Ditto	1 7 6 - 1 9 0
				Canada plates	12 10 0 - 13 0 0
				In London; 20s. less at the works.	
				Yellow Metal Sheathing	p. lb. 9d. - 9 1/4 d.
				Indian Charcoal Pigs	6 12 6 - 6 15 0
				In London	

* At the works, 1s. to 1s. 6d. per box less.

REMARKS.—Though the metal trade has somewhat revived from its late lethargic state during the last few weeks, great quietude still exists, and but a small amount of business is being transacted; most metals, however, show some improvement in price, and tolerable firmness is manifested in the market generally. The state of American affairs forms a very serious hindrance to the trade, and the Indian demand is by no means brisk; still, in spite of these drawbacks, the improved feeling in business generally, owing chiefly to the fine weather, good harvesting prospects, and the low rate of discount in the money market, has extended also to metals.

COPPER.—This metal has been gradually stiffening for some weeks past, and on the 19th inst. the smelters of English announced an advance of 5l. per ton on tough cake, tile, and ingot, and 3d. per lb. on manufactured, making present market rates 98l. for cake, tile, and ingot, and 11d. per lb. for sheets and sheathing. The market, however, is hardly up to fixed rates, and buyers could, no doubt, get their requirements supplied at a fractional reduction. The rise in English has caused a corresponding advance in foreign descriptions, which are just now in rather limited enquiry. Burra Burra, 97l.; Kapunda, 97l. to 98l.; Copiapo, 96l.; Chili slab, in Liverpool, 88l. Yellow metal has only been advanced 3d. per lb.—to 9 1/4 d., but as the demand is small purchases can be effected freely at 9d.

IRON.—In railway bars the demand, though perhaps a shade better, is still far too small to cause any advance in price, which remains at 5l. f.o.b. at the works. For merchant bars makers are tolerably well supplied with orders, but as the present selling price falls short of the cost of production, these orders are only taken just to keep the works going until the demand for rails improves sufficiently to make prices remunerative; 5l. 17s. 6d. to 6l., delivered f.o.b. in London, is the utmost sellers can at present obtain. Staffordshire descriptions show but very little improvement. The orders for shipment are very small, and only for first qualities; inferior brands unsaleable. Swedish bars are rather more enquired for, and ordinary specifications have changed hands at 10l. 15s. Scotch pigs have slightly fluctuated during the week, mixed numbers quoted 50s. 9d., cash, sellers.

LEAD.—This market is pretty steady, but exceedingly quiet. English pigs remain at 19l. 5s. for ordinary soft quality, and 21l. 5s. to 21l. 10s. for W.B. Spanish pig, 18l. 5s.

SPELTEN.—The reaction which has lately taken place in this metal has caused the price to advance to 17l. 10s., at which there are limited buyers, but we cannot see any *bona fide* demand of sufficient magnitude to warrant this sudden strengthening of the market, and it is not unlikely that when speculation has abated the price may again have a downward tendency. Many speculators have been watching the spelter market for some time, and immediately on the slightest appearance of firmness they rushed in, thereby causing this rapid advance by entirely artificial means, and on such a basis it is improbable that our market can be long sustained.

ZINC firm at the advanced price of 24l.

TIN.—The enquiry for this metal has increased, and prices of English are much more firmly maintained. In foreign, fine Straits has realised 113l., which is an advance of fully 2l. since last week. Banca, 114l. 10s. to 115l.; business done at the former figure.

TIN-PLATES are but little in request, and prices remain as last quoted.

LIVERPOOL, AUG. 22.—Our Iron Market is still in a very languid state, with little prospect of improvement for some time to come. Prices, however, are no worse than last reported, the orders that come in enabling makers to adhere with tolerable firmness to rates lately current. Business with the States is all but suspended, and some say, in the present dis-jointed condition of affairs there, the less done with them the better. Welsh bars steady at 5l. 2s. 6d., f.o.b. at shipping port. Lead quiet, and pig is to be had at 18l. 15s. to 19l. Copper firmer; an advance of 3d. per lb. on manufactured, and 5l. per ton on unmanufactured, took place on the 19th inst. Block tin was reduced by circular 3l. per ton on the 9th inst., making the present price 114l. per ton, with little demand. Tin-plates dull. Coke to be had at 20s. 9d., IC, and fair brands of charcoal at 26s. to 26s. 6d. for IC, free on board here. The late suspension of the American house of Messrs. Whittemore and Co., will press heavily on some of the tin-plate workers, who are the largest creditors.

GLASGOW, AUG. 22.—A good deal of activity prevailed in our pig-iron market to-day. A considerable business in warrants was done, at 50s. 7 1/2 d. to 50s. 10 1/2 d. cash; at close, there were buyers at latter rate, sellers at 51s. prompt. G.M.B., No. 1, 50s. 6d.; No. 3, 49s. 6d.

We stated in our last that we had reason to hope for an advance in the prices of tin and copper, and this week copper has risen 5l. per ton, and added new life and buoyancy to the MINING MARKET. A large amount of business has been transacted in dividend and progressive mines, and the demand rather increases than otherwise, and as there is a scarcity of stock, we may fairly hope the depression of the last few months has passed away, and that a better time is coming for "one and all." We have always been of opinion that the high rate of interest allowed on deposit by the joint-stock banks has been the principal cause of the absence of business both on the Stock Exchange and in the Mining Market; and now, as the rate has been reduced, and may be more so in a few days, the public will look out for sound investments, which will pay a higher percentage, with but little risk, and a good selection from dividend and progressive mines offers both. Railways, if we may judge from the reports of the different meetings lately held, are not likely to pay very large dividends, or to invite much speculation, and the greater prospect, therefore, of mines becoming the favourites. Before next week we hope to see tin up, and already there are enquiries for shares in many of the tin mines. The chief business of the week has been in Marke Valley, East Caradon, Ludcott, Carn Carnborne, Wheel Seton, South Tolgus, South Caradon Wheel Hooper, Lady Bertha, Long Rake, Great Wheel Martha, South Frances, Wheel Unity, Retallack, Merilyn, South Condurrow, East Basset, Stray Park, Providence Mines, St. Ives Consols, East Grenville, Grenville, Wheel Mary Ann, Trelawny, North Downs, North Minera, Great Wheel Fortune, Herodsfoot, Cook's Kitchen, Charlotte United, Brynford Hall, East Alfred, Wheel Arthur, Kelly Bray, Great Crinnis, West Seton, Bryn Gwlog, North Treskerby, Par Consols, Tolvadden, Wheel Edward. Cook's Kitchen shares have been flat, and leave off 24 to 26; we understand the mine never looked better than it does at present, and the dullness in the shares is owing to the fall in tin, and the probability that there will not be any dividend at the meeting. Tolvadden shares in request at 3 1/2 to 3 3/4; the mine has greatly improved, and holds out fine prospects for soon paying profits; the lode in the shaft is valued at 35l. to 40l. per fm., the ore being very

rich; the tin lode is worth 25¢ per fm. Alfred Consols shares are flat at 19s. to 21s., owing to the stoppage of Great Alfred. Wheel Clifford, 150; at the meeting, on Wednesday, the accounts showed a profit of 2489¢. 16s. in the two months, and a dividend of 3¢. 10s. per share was declared, leaving 49¢. 7s. 4d. in hand; the report states that the costs for the past two months have been heavy, and this, with the drop in the standard, has reduced the dividend, but the prospects of the mine are such at present as to hold out every encouragement for future success. East Caradon shares have been in good request, and leave off 25½ to 25½; the lode in the 60 east is worth 80¢ per fm.; west, 20¢ per fm.; and the 50 east, 25¢ per fm. Marke Valley, 10 to 10½.

Great South Tolgus have been in great request, and leave off 8½ to 4½; at the meeting, on Thursday, the accounts showed a balance in hand of 4337¢. 18s. 9d.; no dividend was declared, and the mine, on the whole, is looking better. West Basset, 14 to 16; the 65 west has improved, and is yielding 1½ ton of rich grey ore per fathom. Bedford Consols, 2s. 6d. to 3s. 6d.; Bryn Gwio, 25 to 27; Calstock Consols, 4s. to 6s.; Carn Bea, 66 to 68; Devon Great Consols, 350 to 355; Drake Walls, 14s. to 16s.; East Basset, 75 to 80; East Russell, 3 to 3½. Wheel Unity have been in considerable request, and leave off 20s. to 22s. 6d.; the 75 cross-cut is through the elvan, and daily expecting to cut the lode. South Caradon Wheel Hooper also in request, and leave off 1½ to 1½; the agent values the lode in the 62 west at 8¢ per fm., and improving. Grambler and St. Aubyn, 10 to 12. Great Retallack, 19s. to 21s. Great Trevedee, 12s. to 13s., and a large business done. Great Wheel Fortune, 11½ to 12½; Herodfoot, 34 to 36. Hingston Down advanced from 35s. to 40s.; at the meeting a call of 1s. 6d. was made. Great Crinnis, 20s. to 22s. 6d.; in the 100 west the lode is being carried for 7 feet wide, ore throughout, with a leader on the north part 1 ft. wide, increasing in size, and producing good ore. Cuddra, 35s. to 37s. 6d.; no change in the mine, which continues to look well; the lode in the 60 is still worth 15 cwt. of tin per 100 sacks. Eaglebrook, 11 to 12; the mine has improved in the winze sinking from the 10 to the 20 fm. level, the lode is from 4 to 5 feet wide, 3 feet of which is in a rich course of lead ore. At Buller and Basset, the lode in the 80 west is looking more kindly; it is 3 feet wide, consisting of friable quartz, peach, muddle, and spotted with yellow copper ore. Rosewall Hill and Ransom, 1½ to 1½; the mine is much improving; the lode in the west end of the Troan is from 4 to 5 feet wide, and worth 30¢ per fm.; the winze below the 100 is worth 15¢ per fm. The shaft is from 6 feet below the 110, the lode is worth 7¢ per fm. Wheel Crebor, 10s. to 11s.; the lode in the 60 east is improving as it gets under where the hunch of ore was in the 48, and something good is looked for. Lady Bertha, 15s. to 17s. 6d.; Merilyn, 15s. to 17s. 6d.; New Seton, 44 to 46. North Downs have been more freely offered, and leave off 4½ to 4½. North Minera, 27s. to 29s.

Wheel Hope, 1½ to 1½; the 14, on the counter lode, has been driven 2½ fms., and the lode increased from 6 in. to 2 ft. wide, yielding fine stones of lead, and improving. In about three weeks this lode will form a junction with the south lode, where a good deposit of lead is expected. On the other side of the slide, in former years, the mine yielded enormous quantities of rich silver-lead, and smelting-works were erected on the spot. North Robert, 3 to 3½; North Treskerby, 21 to 22; Par Consols, 8½ to 8½; Prosper United, 32s. 6d. to 37s. 6d.; Providence Mines in good demand, at 35 to 35; Sortridge Consols, 11s. to 12s. Carn Camborne shares have been largely dealt in, and leave off 1½ to 1½; the south lode in the adit end has improved, and worth from 15¢ to 20¢ per fm., and this will soon be cut 12 fms. below the adit. South Condurrow, 10s. to 11s. Stray Park shares have advanced to 30, 32; Tolvadden, 24 to 24½; Trencrom, 5s. to 6s.; Wendron Consols, 10 to 12. West Caradon shares have been more in request, at 37 to 39, after declining early in the week to 36. North Dolcoath, 4 to 4½; the lode in the 20 east is looking well; it is from 12 to 18 in. wide, and producing good stones of ore, worth 6¢ per fm., and driving at 45s. West Rose Down shares have further advanced to 21, 23. West Seton shares in good request, at 300 to 310. Wheel Arthur, 6s. 6d. to 8s. 6d., and mine improved. Wheel Basset, 87½ to 90; Wheel Grenville, 32s. 6d. to 35s.; Wheel Margaret, 38 to 40; Wheel Margery, 5 to 6. Wheel Mary Ann shares have advanced to 9½, 10. Wheel Seton shares have advanced to 87½, but, after many fluctuations, leave off 65 to 70. Old Tolgus, 14 to 15; Wheel Trelawny, 13 to 14. Wheel Union, 1½ to 1½; at the meeting, on Thursday, the accounts showed a balance of 452¢. 5s. 3d. against the company, and a call of 4s. per share was made. The flat-roof shaft is down 4 fms. 4 ft. below the 56, where the lode is 2 ft. wide, composed of spar, muddle, copper, and tin ore, worth about 5¢ per fm. In the 40, east of cross-cut, the middle lode is worth 10¢ per fm. for tin. Wheel Laddock, 3½ to 3½. South Frances shares have been in great request, and large purchases made for Cornwall on Friday, from which we presume there is some great improvement in the mine; shares leave off at 125 to 130. Long Rake, 12 to 13; the lode in the 48 east is worth 1½ ton per fm., and calculated to yield 10 tons of ore this month; and the 48 west improving. Brynford Hall, 15 to 17; improved on the Milwr vein, in the 35 yard level; lode not yet cut through, but as far as seen produces good lead. Caradon Consols, 8 to 8½, and the prospects of the mine well reported upon. Great Wheel Martha, 30s. to 32s. 6d.; the engine-shaft, sinking below the 40, is down 7 fms., with favourable indications. The crusher has gone to work, by which means the sampling will increase. West Polmear, 19s. to 20s.; East Rosewarne, 22s. 6d. to 27s. 6d.; the mine is looking better; lode cut good in the 55. Holmbush, 2 to 2½.

On the Stock Exchange, a fair average amount of business has been transacted in Mining Shares during the week. The following prices were officially recorded in British Mining Shares:—East Wheel Russell, 3½; Great South Tolgus, 3½, 4; Hingston Down, 1½; East Caradon, 24, 25, 24½; North Wheel Basset, 4; West Caradon, 36½; South Wheel Frances, 117, 115; Herodfoot, 34½, 35; Wheel Kitty, 5½; Devon Great Consols, 348½, 350; Margaret, 39; Park Consols, 9½; Wheel Trelawny, 13½. In Colonial Mining Shares the prices were:—Bon Accord, 4; Port Phillip, 1; Kapunda, 2½; Great Northern Copper of South Australia, 1½. In Foreign Mining Shares the prices were:—St. John del Rey, 35½, 35½, 36; Linars, 7½; Mariquita, 3; United Mexican, 4½, 4½, 5½, 5½; Fortuna, 2.

The closing quotations for shares in new undertakings were:—Ocean Marine Insurance, 4½, 5½ pm.; Thames and Mersey Marine, 1 prem.; Universal Marine Insurance, 13-16, 11-16 dis.; London and Provincial Marine, par; Oriental and General Marine, 4½ prem.; and Compressed Coal, 4½ prem. The shares of the Mercantile and Commercial Union Fire Insurance Companies were firm, at ½, ½ prem. It is notified that the list of applications for shares in the latter undertaking will be closed on Wednesday next. Madras Irrigation have been in great demand, and rose about 15s. per share. The enquiries extended to East India, Ceylon, Crystal Palace, and Peninsula and Oriental New shares. St. Katherine and East and West India Docks stocks rose 1 per cent.

At Truro Ticketing, on Thursday, 4535 tons of ore were sold, realising 16,101¢. 9s. The particulars of the sale were—Average standard, 125¢. 4s.; average produce, 6½; average price per ton, 5¢. 15s.; quantity of fine copper, 308 tons. The following are the particulars:—

Date.	Tons.	Standard.	Produce.	Price per ton.	Ore copper.
July 25	3303	121 7 0	6 ½	4 5 0	278 16 0
Aug. 1	3778	124 2 0	6 ½	4 14 6	78 10 0
" 8	3915	123 13 0	6 ½	5 10 0	82 8 0
" 22	4535	125 4 0	6 ½	5 15 0	84 13 6

Compared with the last sale, the advance has been in the standard 1¢. 16s., and in the price per ton of ore about 2s. 4d. Compared with the corresponding sale of last month, the advance has been in the standard 5¢. 10s., and in the price per ton of ore about 7s. 2d.

At Wheal Owles meeting, on Aug. 16, the accounts for the three months ending June showed—Balance last audit, 1531¢. 3s. 1d.; tin sold and sundries, 4627¢. 2s. 6d. = 6188¢. 5s. 7d.;—Mine cost, merchants' bills, and sundries, 4249¢. 19s. 3d.; leaving credit balance, 1939¢. 6s. 4d. The profit on the three months' working was 377¢. 3s. 3d. A dividend of 400¢. (5¢ per share) was declared, and 1508¢. 6s. 4d. carried to credit of next account. During the quarter 478 fms. 5 ft. 10 in. of ground has been removed. Upon an average, 34 pitches have been working on tribute.

At Wheal Clifford and Consols meeting, on Wednesday, the accounts showed a profit of 2489¢. 16s.; from which deduct New Engine loss, 769¢. 11s. 7d., and the balance is 1720¢. 4s. 8d.; add balance of May, 19¢. 2s. 11d. = 1739¢. 7s. 4d. A dividend of 3¢. 10s. per share was declared, leaving 49¢. 7s. 4d. to the credit of next account. The agents report that the mine holds out every encouragement for success.

At North Downs Mining Company meeting, on the 15th inst., the accounts showed a credit balance of 1947¢. 1s. 7d. A dividend of 750¢. (3s. 6d. per share) was declared, and 5147¢. 1s. 7d. carried to the next account. The proceedings are given in another column.

At Hingston Down Consols meeting, on Thursday (Mr. W. A. Thomas in the chair), the accounts showed—Balance last audit, 1177¢. 11s. 11d.; ore sold and carriage, 1328¢. 13s. 4d.; calls received, 1527¢. 1s. 3d.;—Mine cost, merchants' bills, and sundries, 1488¢. 0s. 7d.; leaving credit balance, 1697¢. 17s. 8d. A call of 1s. 6d.

per share was made. Capt. T. Richards reported upon the various points of operation. The next sampling will be about 300 tons of ore, and the cost for the ensuing two months, including about 35¢ per month at the new shaft, will probably be 1500¢.

At Wheal Moyle meeting, on Thursday (Mr. E. Cooke in the chair), the accounts for the five months ending June showed—Mine cost, 804¢. 14s. 5d.; merchants' bills, 999¢. 19s. 7d.; royalty, 21¢. 2s. 6d. = 1825¢. 17s. 6d.;—Balance last audit, 2517¢. 12s.; tin sold, 381¢. 4s. 1d.; leaving debit balance, 1194¢. 1s. 5d. A call of 4s. per share was made. Captains John Tregoning and George Johns reported that, on the whole, the mine never looked more cheering.

At the North Dolcoath Mine meeting, on Wednesday (Mr. W. C. Vivian in the chair), the accounts for five months showed a debit balance of 671¢. A call of 2s. per share was made. Soon after the commencement of operations by the present company some good deposits of silver ores were found in the gossan at the 10, and about 6000¢. worth was sold, from which several dividends were paid, and an engine erected capable of working the mine to the 100. The silver, however, did not continue in depth, but the fine gossan passed through left little doubt that copper ore would be met with. Operations have, therefore, been prosecuted with vigour, in expectation of such result. Levels have been driven at 20 fathoms deep, where the lode is of a promising character throughout; the shaft has been sunk on the course of the lode, which has but a slight underlie, to the depth of 35 fms., where new levels are being commenced, and the anticipations of the shareholders seem now on the eve of being realised. The latest intelligence states that in the 20 the lode is yielding yellow copper ore, worth 6¢ per fm.; driving at 2¢. 5s.; the lode in the shaft is of good character, and there is little doubt that the 25 will prove productive. These shares were for a time at a high premium; at present the price is merely nominal, and they may be worth the attention of both speculator and investor.

At North Levant Mine meeting, on August 13, the accounts for the six months ending June showed—Balance last audit, 947¢. 17s. 10d.; labour cost, 1412¢. 16s. 8d.; materials, 3441¢. 14s. 3d. = 1927¢. 7s. 9d.;—Tin sold, 1430¢. 5s.; copper ore sold, 417¢. 5s. 1d.; calls received and sundries, 2¢. leaving debit balance, 378¢. 16s. 10d. A call of 4s. per share was made. Captains Bennett and Thomas reported that they propose sinking Mexico shaft, as future prospects depend principally on developing this part of the mine.

At the Great Wheal Alfred meeting, on Tuesday (Dr. A. Beattie in the chair), it was resolved that the mine be stopped, after an amendment had been put and lost that the operations should be continued. There were 961 votes in favour of the resolution, and 475 in favour of the amendment. Details appear in another column.

At the North Great Work Mine meeting, on Tuesday, the accounts showed a balance in favour of the mine of 214¢. 9s. 9d. The report of the manager—Capt. Joseph Vivian—stated it would take about five months for the 10 to reach the richest part of the tin ground discovered by the deep adit, and in the mean time the returns of tin would meet the expenditure within 50¢ per month, but there was every probability of important discoveries being made between the present point of operations and that to be arrived at. A parcel of tin will be ready for the smelting-house at the end of the present month.

At Wheal Anne (St. Austell) general meeting, on Tuesday, the accounts showed a debit balance of 801¢. 13s. 2d. A call of 5s. per share was made. The prospects of the mine are deemed highly favourable, and there is little doubt that by the next meeting the company will be in a most excellent position, as the returns of tin will then be coming in to meet the expenditure. The report presented at the meeting will be found in another column.

At West Tolvadden Mine meeting, on the 14th inst., the accounts showed a debit balance of 4547¢. 10s. 5d. A call of 2s. per share was made. Details of the meeting will be found in another column.

At New Wheal Vaddon meeting, the accounts showed—By calls, 129¢; and to mine cost and merchants' bills paid since last meeting, 1227¢. 17s.—leaving at bankers 6¢. 3s. A statement of liabilities and assets showed a credit balance of 3111¢. 10s. 4d. The report of Capt. W. H. Reynolds is among the Mining Correspondence.

At the English and Australian Copper Company half-yearly meeting, on Thursday (Mr. R. A. Routh in the chair), a dividend of 2s. 6d. per share was declared, which, including the amount to be carried to the reserve fund, will absorb the sum of 9620¢. The present financial position of the company upon this side showed a credit of about 22,000¢, after the liquidation of all liabilities, and the realisation of all assets. From June 30, 1860, to May 25, 1861, there had been 14,659 tons of ore received from the Burra Burra Mine. During the same period there had been smelted at the works 10,373 tons, against 6991 tons during the whole of the previous year. The quantity of copper made from June 30, 1860, to June 25, 1861, had been no less than 3007 tons, against 1975 tons made in the previous year. By means of the new furnace at the port, which are in an advanced state of progress, it was estimated that an annual saving of about 5000¢. would be effected; these works are being erected for the purpose of smelting that proportion of ore which would otherwise be shipped to this country in an unrefined state. Details in another column.

LEEDS, AUG. 22.—In Mining Shares a slight improvement has taken place, and a fair amount of business has been transacted:—Brea Consols, 17s. to 20s.; Cornubia, 15s. to 18s.; Craven Moor, 3s. to 4s.; Merryfield, 5s. to 6s.; Nidderdale, par; North Hallenbeagle, 15s. to 25s.; Wensleydale, 7s. to 8s.; Yorkshire, 10s. to 12s. 6d. APPLETRICK (near Skipton).—The machinery at this mine is being erected, the long level has been completed, and productive veins have been discovered. The result is that there is a considerable increase in the number of miners employed. The ore is now brought to the surface at a comparatively trifling cost, and the shares have rapidly risen in value, having within the last eight months doubled their then estimate. The NIDDERDALE LEAD MINING COMPANY.—The half-yearly meeting of the shareholders was held at the Griffin Hotel, Leeds, on Monday (Mr. G. P. Smith, of Bradford, Chairman of the company, presided). The balance-sheet for the past half-year, and the report of the directors, were read by Mr. T. Sykes, the secretary, and a resolution approving thereof was unanimously passed. Mr. Benjamin Calvert, the company's agent, gave a lengthy and exceedingly encouraging report of the mine, in the course of which he stated that the Sir Thomas's shaft continued to produce good ore; that the rise to the Sun vein, in the Hole Bottom shaft, was still productive, and was being worked with good results, and that they were then engaged in the third smelting of lead. The meeting was well attended by gentlemen from Leeds, Bradford, Pateley Bridge, and Castleford, and a determination was expressed to work the mine with vigour. The meeting was a unanimous one, and terminated satisfactorily.—JOHN GLEDHILL AND CO.

COAL MARKET.—On Monday, the 39 arrivals comprised a good number of screw-steamers, and the quantity of coal for sale of all descriptions was limited; the demand was languid, and prices closed without the slightest change. Best house coal, 18s. 3d. to 18s. 9d.; seconds, 16s. to 17s.; Hartley's, 15s. to 16s.; manufacturers', 12s. 6d. to 14s. 6d. per ton.—Wednesday: The arrival of 66 ships to-day produced more animation in the market, and a considerable amount of business was done, at fully previous prices, for all sorts.—Friday: To-day 101 ships arrived. The supply of house coal was large, and the merchants required some reduction in prices, which the factors refused to concede, consequently the amount of business was small. Hartley's sold freely at fully previous value; manufacturers' dull, without quotable alteration. Hetton's Wallsend, 18s. 9d.; Lambton's Wallsend, 18s. 3d.; Gosforth's Wallsend, 16s.; Hartley's, 15s. 6d. to 16s. 6d.; Tanfield's, 13s.; and Holywell Main, 14s. 6d. per ton: 51 cargoes unsold; 55 ships at sea.

CONTRACT FOR COAL.—The Admiralty require a supply of South Wales coal for the use of Her Majesty's vessels at Falmouth, under a contract for twelve months certain.

EXPORTS OF COAL.—By the Monthly Circular of Messrs. Laird, we learn that the quantities of coal exported during July was 783,437 tons, against 655,116 tons in the corresponding month of 1860, showing an increase of 128,321 tons. The particulars are:—From the Northern Ports, 467,586 tons; Yorkshire, 19,438 tons; Liverpool, 68,410 tons; Severn Ports, 173,578 tons; and Scotch, 54,475 tons. The increase is from all of the above ports. The total exports from Jan. to July were 4,240,309 tons, against 3,865,213 tons in the same period of 1860, being an increase of 375,096 tons in 1861.

THE IRON TRADE.—The shipments of Scotch pig-iron during the present year, as compared with the corresponding period of 1860, exhibit the following results:—

Month ending	January	February	March	April	May	June	July	August
Tons	31,519	29,738	42,554	62,622	65,437	73,600	48,304	11,971
1861.	32,454	25,278	46,928	50,585	54,488	62,925	47,846	10,949
1860.	32,454	25,278	46,928	50,585	54,488	62,925	47,846	10,949

These figures show a total export of 376,182 tons in the last 32 weeks, as against 334,324 tons in 1860, being an increase of 41,858 tons. The totals do not, of course, include the quantities which have gone into consumption in Scotland and through inland communications. The production has been reduced during the last six months, the number of furnaces in blast in Scotland having been only 119 in July as compared with 131 in Jan. The same dullness is observable in other parts of the country, the number of furnaces in blast in England having been 276 in July as compared with 276 in Jan., and in Wales 129 as compared with 145 in January. Altogether, 48 furnaces are thus shown to have been blown out, and assuming that a speedy improvement does not take place, this year's make of pig-iron will probably be from 300,000 to 400,000 tons less than in 1860.

THE UNITED STATES.—From the Board of Trade returns for June, we learn the particulars of the decline in our export trade to the United States; we select the following as of interest to our readers:—

	1860.	1861.	Decrease.
Iron	175,903	236,705	121,938
Hardware and cutlery	49,261	48,246	1,015
Tin-plates	55,760	27,477	28,283
Lead	10,970	—	10,970

QUICKSILVER.—The last advices from California state that the quicksilver mines of New Almaden, which were so long a subject of litigation, are now again in full operation, and that their yield is immense. According to one account, the workmen have reached the depth of 18 ft. below the surface, and the quicksilver is still found in little globules, so thick that a stream almost follows the stroke of the pick. The San Francisco Mining and Scientific Press says—"There have been many recent discoveries of rich cinnabar in various portions of our prolific State, in consequence of the long stoppage of the great New Almaden Mine, owing to tedious and vexatious litigation. This mine, however, is at last in full operation again, and its annual product of over 1,000,000 lbs. of quicksilver will again be in the market. The New Almaden, New Idria, Enriqueta, and Guadalupe Mines of Santa Clara county, with the many recently-discovered and partially worked cinnabar veins of Napa and Sonoma counties (which contain liquid quicksilver), already turn out some 4,000,000 lbs. of quicksilver per annum—an amount nearly large enough to supply the world—and, doubtless, when these latter shall have been more thoroughly opened, the yield will reach the high figure of 8,000,000 lbs., the

value of which, at the rate of 90 cents per lb., would be no less than \$2,400,000; and this we think is a moderate estimate. Hittell says the average aggregate annual yield of the four great Santa Clara Mines, at 3,510,000 lbs., but it has reached as high as 4,275,000 lbs.; and as they are by no means worked to the best advantage, we may safely look for largely increased returns as the operations of the companies are extended. Lack of experience, money, and harassing litigation, heretofore have very much retarded these operations; and we shall not be at all surprised if within the next ten years the annual yield from Santa Clara doubles itself. If the accounts of discoveries in Napa and Sonoma counties approach the truth, then we have a still richer district there, whose yield can hardly be computed. Accounts recently received from Washoe also speak of rich cinnabar veins discovered; we hope the reports are true. With so many mines, and such vast yields, we may safely predict that the wholesale price of quicksilver will constantly decrease until it reaches 5 or 10 cents per lb. Quicksilver will then be used with a more liberal hand in the search for gold and silver, and many other advantages to the world will arise from its cheapness."

LAKE SUPERIOR MINES.—The Miner of July 27 gives the following as the product of copper from the principal mines for the month of June:—

Mines.	1860.	1861.
Minnesota	294,268 pounds, or 102 tons 368 pounds.	
National	172,000 "	or 61 "
Rockland	87,368 "	or 31 "
Superior	7,424 "	or 3 "

An instance of profitable stamping is mentioned:—On July 25, the Pewabic (Lake Superior) Mine mill stamped 10,000 lbs. of mineral, averaging 90 per cent. produce, and worth upwards of 300¢.—this being the largest product ever obtained in a single day from a single mill on Lake Superior.

INSURANCE COMPANIES.—The following list shows the amount per share paid, and the present prices of the shares of some of the leading insurance offices in London, and demonstrates the generally profitable nature of the business:—

Company.	Amount paid.	Present value.
Atlas (Life and Fire)	£ 5 15 0	£ 12 0 0
County (Fire)	10 0 0	84 10 0
Imperial (Fire)	50 0 0	253 0 0
London (Life, Fire, and Marine)	12 10 0	42 10 0
Phoenix (Life)	25 0 0	150 0 0
Royal Exchange (Life, Fire, & Marine)	100 0 0	305 0 0
Union (Life and Fire)	29 0 0	275 0 0
San (Fire)	—	[All returned.]
Indemnity (Marine)	50 0 0	140 0 0
Alliance (Fire)	25 0 0	54 0 0

SILVER VEIN.—In our advertising columns is an announcement from the manager of the works at Lostwithiel that he is prepared with ore for sampling treated under Mr. Squire's process, so that this interesting question will quickly be brought to an issue; and, unless we are misinformed, even the poorer ores will prove to be commercially remunerative.

GLAN-Y-PWLL SLATE AND SLAB COMPANY.—We understand two of the directors, with the secretary, are about to visit this quarry in the course of next week, for the purpose of extending operations. The slate rock in both the levels is quite equal to anything in the district. No. 1 level is now driven 82 yards across the vein.

LEAD ORES.

Sold on the 16th August.			
Mines.	Tons.	Price per ton.	Purchasers.
Aberdovey	27½	£11 11 0	Newton, Keates, & Co.
Dyffryn	25	11 11 0	ditto
Llanerchyr	25	12 14 0	Walker, Parker, & Co.
Sold on the 19th August.			
Frongoch	70	11 4 0	Panther Co.
ditto	70	11 8 0	ditto
East Darren	84	13 11 6	ditto
Cwm Erlli	55	13 12 6	Newton, Keates, & Co.

BLACK TIN.

Sold on the 6th August.			
Mines.	Tons c. q. lbs.	Price per ton.	Amount.
Charlestown Unit.	27 7 3 11	£63 0 0	£1725 14 5
Sold on the 17th August.			
East Lovell	1 9 3 24	65 0 0	97 7 6—Chyndour.
ditto	0 3 1 10	57 0 0	9 10 0—ditto
Treworles	5 5 0 3	64 5 0	337 8 0—ditto

COPPER ORES.

Sampled Aug. 7, and sold at the Royal Hotel, Truro, Aug. 22.					
Mines.	Tons.	Price.	Mines.	Tons.	Price.
Devon Great Consols	123	£3 18 0	East Caradon	50	£12 3 6
ditto	118	3 18 0	West Caradon	63	7 8 6
ditto	119	4 1 6	ditto	53	10 17 6
ditto	109	9 9 0	ditto	51	15 2 6
ditto	106	4 9 0	ditto	50	6 2 6
ditto	104	9 1 6	ditto	16	1 8 0
ditto	102	4 14 6	Great Wheal Martha	96	2 13 6
ditto	94	5 18 6	ditto	80	2 10 0
ditto	86	3 4 0	ditto	44	2 17 6
ditto	81	3 19 0	Wheal Edward	50	3 2 0
ditto	77	4 18 6	ditto	40	3 15 0
ditto	69	4 0 0	ditto	45	5 16 0
Phoenix Mines	94	5 13 6	ditto	42	4 12 0
ditto	88	6 0 6	Bedford United	108	5 2 0
ditto	80	5 13 0	ditto	96	5 1 0
ditto	78	6 12 0	North Robert	70	10 2 0
ditto	74	5 13 0	ditto	52	3 3 0
ditto	73	9 7 6	ditto	36	5 14 0
ditto	70	7 4 0	Wheal Emma	63	3 6 0
ditto	67	10 9 6	ditto	58	4 13 6
ditto	60	3 17 6	ditto	26	1 9 6
ditto	58	3 17 6	Wheal Friendship	53	7 19 6
ditto	56	5 6 6	ditto	53	19 4 0
ditto	50	5 5 6	Devon and Cornwall	54	1 7 0
ditto	49	5 4 6	ditto	51	2 15 6
ditto	40	3 15 6	Sortridge Consols	74	6 1 0
Wheal Crelake	90	3 14 0	Kelly Bray	48	4 9 0
ditto	70	7 2 0	ditto	26	1 11 6
ditto	69	7 16 6	Molland Mine	60	5 4 0
ditto	66	6 5 0	Tavy Consols	38	2 19 6
ditto	48	8 7 0	West Devon Consols	23	3 2 0
East Caradon	100	7 15 0	Trenouth	11	1 12 6
ditto	70	7 10 6	Brook Wood	15	4 17 6
ditto	60	7 3 0	Virtuous Lady	10	1 18 6
TOTAL PRODUCE.					
Devon Great Con.	1179	£3405 9 6	Wheal Friendship.	120	£1074 18 6
Phoenix Mines	624	4535 15 6	Devon & Cornwall.	105	214 8 0
Marke Valley	395	1982 6 0	Sortridge Consols.	74	449 11 0
Wheal Crelake	345	1982 6 0	Kelly Bray	71	240 11 0
East Caradon	285	2339 10 0	Molland	60	313 10 0
West Caradon	233	2144 3 6	Tavy Consols	38	11 17 6
Great Martha	220	585 6 0	West Devon Consols	23	7 11 6
Wheal Edward	217	889 14 0	Trenouth	21	34 2 0
Bedford United	204	1035 12 0	Brook's Wood	15	72 15 6
North Robert	158	1076 0 0	Virtuous Lady	10	19 5 0
Wheal Emma	147	617 8 0			

CLAY CROSS COLLIERY ACCIDENT.

AT A MEETING of the INHABITANTS of CHESTERFIELD and the neighbourhood, held in the Municipal Hall, in Chesterfield, on the 9th August, 1861, for the purpose of giving expression to the sympathy felt for the sufferers by the late calamitous inundation at the Clay Cross Colliery, and to make arrangements for a Public Subscription in their behalf.

THE MAYOR OF CHESTERFIELD in the chair.

It was proposed by the Ven. Archdeacon HILL, seconded by Mr. BARROW, and resolved:—That this meeting desire to express its sympathy with the sufferers by the late calamitous accident at the Clay Cross Colliery, and recognise the duty and obligation of contributing by means of a public subscription to a fund to be raised in aid of the widows, orphans, and families of those whose lives have been lost.

Proposed by Mr. BUSBY, seconded by the Rev. A. POOLE, and resolved:—That a committee be formed, for the purpose of raising and collecting subscriptions, consisting of the following gentlemen, with power to add to their number:—The Mayor of Chesterfield, Mr. Barrow, Mr. Fowler, Mr. Carrington, Mr. R. Coke, Mr. Markham, Mr. Binns, Mr. Turbutt, the Ven. Archdeacon Hill, Mr. Cottingham, Mr. Busby, the Rev. Geo. Butt, the Rev. Jos. Oldham, the Rev. A. Poole, the Rev. E. C. Willey, Mr. John Ward, Mr. Woodhouse, Mr. Jeffcock, Mr. Irving, Mr. Bingham, Mr. W. Goodwin, and Mr. S. Denham.

That a subscription list be at once opened and left with the several bankers in Chesterfield and Derby, who shall be requested to receive subscriptions; and that Mr. Geo. Barrow be requested to act as honorary secretary of the committee.

Proposed by the Rev. GEORGE BUTT, seconded by Mr. MARKHAM, and resolved:—That Mr. Shipton (Mayor of Chesterfield), Mr. Jackson, Mr. Turbutt, and Mr. Barrow be trustees of the fund.

Proposed by the Rev. JOHN BOYER, seconded by Mr. IRVING, and resolved:—That the distribution and appropriation of the funds collected shall be entrusted to Mr. Turbutt, Mr. Milnes, Mr. Binns, Mr. R. Coke, the Rector of Northwingfield, and the Rev. Joseph Oldham.

Proposed by Mr. CARRINGTON, seconded by Mr. BINGHAM, and resolved:—That these resolutions be advertised in the Derby and Chesterfield newspapers.

JOSEPH SHIPTON (Mayor), Chairman.

The Ven. Archdeacon HILL proposed, and Mr. BARROW seconded, a vote of thanks to the Chairman.

The following subscriptions were announced at the meeting:—

The Clay Cross Colliery	£200 0 0
Charles Binns, Esq., Clay Cross	50 0 0
George Vaughan, Esq., Salsbary	25 0 0
Dunston and Barlow Company	25 0 0
Dr. Packman, Tupton Hall	20 0 0
Richard Barrow, Esq., Staveley	50 0 0
The Wingerworth Iron Company	25 0 0
Archdeacon Hill, Hasland	25 0 0
Rev. J. Boyer, Spital House	10 0 0
Mr. Irving, Chesterfield	10 0 0
Mr. Josiah Elliott, Brampton	1 0 0
Charles Markham, Esq., Derby	10 0 0
Richard G. Coke, Esq., Ankerhold	10 0 0
Rev. G. Butt, Chesterfield	5 0 0
The Mayor of Chesterfield	5 0 0
C. S. B. Busby, Esq., Chesterfield	5 0 0
Rev. J. Nodder, Ashover	5 0 0
Wm. Bingham, Chesterfield	10 0 0
Rev. A. T. Blythe, Staveley	3 0 0
William Drabble, Esq., Chesterfield	10 0 0
William Clayton, Esq., Chesterfield	5 0 0
SUBSCRIPTIONS SINCE RECEIVED.	
The High Sheriff and Mayor of Derby	5 0 0
Godfrey Heathcote, Esq., Chesterfield	2 0 0
Mrs. Turner, White Lodge	1 0 0
Bucknell and Castle, Chesterfield	1 0 0
Margaret Ellis, Chesterfield	1 0 0
Anna Storrs, Chesterfield	2 0 0
W. P. Thornhill, Esq., M.P.	20 0 0
Rev. J. Oldham, Esq., Chesterfield	5 0 0
Mrs. E. Walker, Clay Cross	5 0 0
Messrs. J. and G. Robinson, Chesterfield	20 0 0
James McLean, Esq., Cannock Chase	50 0 0
W. Rooth, Esq., Chesterfield	5 0 0
Wm. Milnes, Esq., Stubbins Edge	5 0 0
Wm. Milnes, Jun., Esq., Stubbins Edge	5 0 0
Rev. A. Poole, Chesterfield	1 0 0
Glavin Turbutt, Esq., Osgate Hall	30 0 0
Crompton, Newton, and Co., Chesterfield	10 0 0
R. B. Barrow, Esq., Sydney Hall	10 0 0
The Messrs. Eaker, Chesterfield	1 0 0
Charles North, Chesterfield	10 0 0
The Salsbary Colliery Co. (per G. Vaughan, Esq., Leicester-shire)	50 0 0
John Bromley, Esq., Derby	5 0 0
Hewitt and Heane, Chesterfield	2 0 0
The Clay Cross Workmen, including small subscriptions collected in the neighbourhood	180 0 0
Mr. Holdsworth, Clay Cross	10 0 0
Mr. Robinson, Clay Cross	5 0 0
Messrs. Woodhouse and Jeffcock, Derby	21 0 0
The Duke of Devonshire	50 0 0
J. G. Cottingham, Esq., Edensor	5 0 0
A Friend	1 0 0
Mr. G. Binns, Clay Cross	5 0 0
Mrs. Johnson, Somersall	2 0 0
Mr. John Gothard, Chesterfield	1 0 0
The Proprietors of the Colliery Guardian	1 0 0
Mr. W. Hawkins, Belper	10 0 0
W. J. Wilson, Esq., Clay Cross	5 0 0
Mr. Denton, Clay Cross	1 0 0
Messrs. Hawkins and Son, Chesterfield	1 0 0
Messrs. Stanley and Co., Sheffield	5 0 0
Messrs. Rickett, Smith, and Co., London	21 0 0
Mr. H. Ashmore, Clay Cross	5 0 0
G. N. Browne, Esq., Derby	5 0 0
Jas. Allport, Esq., Derby	5 0 0
M. Kirtley, Esq., Derby	5 0 0
S. Swarbrick, Esq., Derby	3 0 0
Mr. Pettifor, Nottingham	1 0 0
Mr. Roberts, Chesterfield	1 0 0
Fred. Swanwick, Esq., Whittington	20 0 0
Miss Croft, Chesterfield	10 0 0

Subscriptions will be received by the Mayor of Chesterfield, the Derby and Chesterfield banks, and by the Honorary Secretary.

BELL BROTHERS beg to intimate that, having become SOLE LICENSEES in the United Kingdom of P. DEVI'S METHOD OF PRODUCING PURE ALUMINIUM, they are now in a POSITION TO SUPPLY, from their works here, both this metal and its compound with copper, known under the name of ALUMINIUM BRONZE.—Newcastle-on-Tyne, September, 1860.

DODDS' IRON AND STEEL PATENT LICENSING COMPANY (LIMITED).

This company is PREPARED TO GRANT LICENSES on moderate terms for the USE of their PATENT for STEELING RAILS, POINTS, CROSSINGS, MACHINERY, and EVERY DESCRIPTION of IRONWORK.

The process, which is exceedingly reasonable in cost, and gives the most extraordinary durability to the material, has been highly approved of by the following gentlemen, firms, and companies, several of whom have extensively adopted the valuable improvement:—

ROBERT STEPHENSON, Esq.
JOHN BOURNE, Esq.
J. PERRIN, Esq.
THOS. E. HARRISON, Esq.
THE GREAT INDIAN PENINSULA RAILWAY COMPANY.
THE NORTH-EASTERN RAILWAY COMPANY.
MESSRS. STEPHENSON AND CO.
THE EAST LANCASHIRE RAILWAY COMPANY.
THE GREAT NORTHERN RAILWAY COMPANY.
THE MIDLAND RAILWAY COMPANY.
THE METROPOLITAN RAILWAY COMPANY have ordered a large quantity of rails by this process.

THE FOLLOWING FIRMS ARE PREPARED TO EXECUTE ORDERS under the company's patent:—

MESSRS. S. BEALE AND CO., PARK GATE, ROTHERHAM.
MESSRS. DODDS AND SON, ROTHERHAM.
MESSRS. LOM, WILSON, AND BELL, NEWCASTLE-ON-TYNE.
THE EBWY VALL COMPANY, SOUTH WALES.
MESSRS. LEVICK AND SIMPSON, NEWPORT, MONMOUTHSHIRE.
MESSRS. LLOYD, FOSTERS, AND CO., WEDNESBURY.
THE ISCA FOUNDRY COMPANY, NEWPORT, MONMOUTHSHIRE.

Applications for Licenses can be made to R. COOK, Esq., at the company's offices, No. 7, St. Isaac-lane, London, E.C., where also testimonials and other information may be obtained.

THE LONDON AND PROVINCIAL AGRICULTURAL COMPANY (LIMITED).

CHIEF OFFICES AND DEPOT, 40, MARK LANE, LONDON.

ALBERT WORKS, STRANGWAYS, MANCHESTER.

This company, having obtained the established business of the late Messrs. Thomas Retigan and Co. on most beneficial terms, will be PREPARED TO SUPPLY, on and after the 1st of September:—

THE ROYAL PATENT CAKE FOR CATTLE, at £12 10 0 per ton.

THE COMPOUND FEEDING MEAL, at 15 12 0 per ton.

THE ORIGINAL ECONOMIC FOOD FOR CATTLE, at 1 10 0 p.cwt.

AND FIRST-CLASS MANURES AT ADVANTAGEOUS PRICES.

These celebrated and reliable productions will be manufactured on an extended scale by this company, at the above reduced and legitimate prices; and the public are confidently invited to participate in the lucrative return that must inevitably be rendered from the increasing operations of a business which is already established, highly profitable, and partially patented.

Shares, £1 each; 10s. payable on allotment; for which immediate application is requested, as the list will close shortly.

Full particulars, prospectuses, and share application forms may be had from the company's agents in each district: the bankers, the London and County Bank, Threadneedle-street, London; the auditors, Messrs. COOPER, BROTHERS, and Co., 13, George-street, Mansion House, London; the brokers, F. EVERETT, Esq., 17 and 18, Royal Exchange, London; and W. POTTER, Esq., Royal Exchange, Manchester; and from the secretary, at the offices.

* Applications for agencies in unrepresented districts will be entertained.

THE PROGRESS OF MINING IN 1860, BEING THE SEVENTEENTH ANNUAL REVIEW.

By J. Y. WATSON, F.G.S., Author of the Compendium of British Mining (published in 1843), Gleanings among Mines and Miners, &c.

THE SIXTEENTH ANNUAL REVIEW OF MINING PROGRESS appeared in the MINING JOURNAL of December 31, 1859, and January 7, 1860.

A FEW COPIES of the REVIEW OF 1855, containing Statistics of the Metal Trade, the Dividends and Percentage Paid by British and Foreign Mining Companies, and the State and Prospects of upwards of 200 Mines. Also a FEW COPIES of the REVIEW OF 1852, 1853, and 1854, MAY BE HAD on application at Messrs. WATSON and CUELL'S Mining offices, 1, St. Michael's-alley, Cornhill, London.

Also, STATISTICS OF THE MINING INTEREST. By W. H. CUELL.

WATSON AND CUELL'S MINING CIRCULAR, published every Thursday morning, price 6d. or £1 1s. per annum, contains Special Reports of Mines, and the Latest Intelligence from the Mining Districts, from an exclusive resident agent; also, Special Recommendations and Advice upon all subjects connected with Mining, and interesting to investors and speculators. A Record of Daily Transactions in the Share Market, Metal Sales, and General Share Lists, &c. Edited by J. Y. WATSON, F.G.S., and published by WATSON and CUELL, 1, St. Michael's-alley, Cornhill.

M.B. Messrs. WATSON and CUELL have made a selection of a few dividend and progressive mines, which they have reason to believe will pay good interest, with a probability, also, of a rise in value, the names and particulars of which will be furnished on application.

INVESTMENTS IN BRITISH MINES.

MR. MURCHISON'S REVIEW OF BRITISH MINING for the QUARTER ENDING 30th MARCH, 1861, with Particulars of the Principal Dividend and Progressive Mines, Table of the Dividends Paid in the last Five Years, &c., is NOW READY.

Price One Shilling. At 117, Bishopsgate-street Within, London, E.C.

Reliable information and advice will at any time be given on application.

Also, COPIES of "BRITISH MINES CONSIDERED AS AN INVESTMENT," by J. H. MURCHISON, Esq., F.G.S., F.S.S. Pp. 356, boards, price 3s. 6d., by post 4s. See advertisement in another column.

COLLIERY EXPLOSIONS, AND A MEANS TO PREVENT THEM.

BY RICHARD HUGH HUGHES.

A pamphlet replete with highly interesting historical narrative, and thoroughly business-like remarks, bearing upon colliery explosions and colliery ventilation.—Mining Journal.

London: F. Plummer, printer, 21, Great New-street, E.C.; and the Author, Atlas Safety Gas-Fitting Works, Hatton Garden.

Notices to Correspondents.

Much inconvenience having arisen, in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be regularly filed on receipt: it then forms an accumulating useful work of reference.

SAFETY-LAMPS.—I have anxiously watched for a detailed description of, and an expression of your opinion concerning, Mr. Hall's new lamp for burning paraffine and similar hydro-carbon oils in coal mines, and the recent explosion of a paraffine oil lamp certainly adds to the interest that will attach to the invention; for a gentleman so well acquainted with coal, and coal products, and engaged in producing a paraffine lamp for use in an explosive atmosphere, will doubtless discover the most inexpensive lamp that can possibly be hoped for, and very slight modifications would, probably, convert it into a perfect domestic lamp. I trust Mr. Hall will lose no time in making every particular connected with his lamp known, at it may, at least, have the effect of one of the most beautiful products of coal falling into disuse.—D. R. C.

MINING SHARE DEALING.—I should be glad to learn if I should be justified in renouncing shares in a mine on which calls have been made (and paid by me) since I gave a notice of transfer of the shares, the purchaser refusing or neglecting to register the transfer? If not, what is the proper course to adopt to get rid of my further liabilities?—A SUBSCRIBER.

ANCIENT GEOLOGY.—In last week's Journal I read with much pleasure an article entitled "Ancient Geology." If I understand the writer, the gist of his argument goes to show that in "ages long gone past" the Sun's rays, combined with electricity, went to form the rocks, with their various metals enclosed, which theory, if not novel, is at all events a very bold one, and not without evidence to support it. I have one objection, however, to make to what I consider an erroneous assumption of the writer (when referring to the discovery of the great German chemists, Bunsen and Kirchhoff)—that they assert the rays of the Sun contain several of the metals. If I remember your own description of the so-called discovery correctly, by heating iron, nickel, or soda, &c., found their flames to show a corresponding colour, and by observing the spots on the atmosphere of the Sun they suggested such spots (having an appearance similar to the flames of the above metals) might be the result of the burning of the metals in the Sun also. That they assert it as being proved I very much doubt, but if mistaken I should be glad to be put right.—JAMES REID, Jun.

SILVER VEIN MINING COMPANY.—Will the directors, or anyone interested, inform me when the sampling of the 30 tons of silver gossan is to take place? The result ought to have been known some two or three months ago. Also, I should like to be informed when the meeting of the shareholders is to take place?—A SHAREHOLDER.

GOLD MINING IN VIRGINIA.—Will any of your correspondents inform me who are the London agents of the Union Gold Mining Company of Virginia, U.S., established 1835, and from what period the company commenced paying dividends to original shareholders, or from whence I may most readily obtain the information I am anxious to gain?—D. C.

TINCOFT MINING COMPANY.—The course adopted by some of the scripholders of this company is apparently inexplicable. I refer to the fact that some of those who were the most clamorous for an alteration in the constitution of the company, and very profic in their recommendations, absented themselves from the very meeting that had been convened by the directors for the purpose of taking into consideration the points proposed, while the remainder of the meeting copied and signed, or at any rate, not support, the recommendations which they had assisted in putting forward upon the previous occasion. It has been said that the proposers and supporters of the movement were temporarily made competent to attend the last annual meeting for the purpose of affording an opportunity of indirectly redressing a supposed grievance on the part of one who had been originally officially connected with the company. But both as it may, it certainly would have been a more seemly proceeding had those gentlemen who were foremost in their suggestions and complaints at least attended the meeting called for the purpose of discussing the propositions they themselves had initiated; it may be, however, that it would have been inconvenient for those parties to have been present, as it is more than likely that they would have been respectfully reminded of things past and gone.—A SCRIBER.

WEST WHEAL FRIENDSHIP.—Can any of your correspondents give me information respecting the West Wheal Friendship Copper Mining Company, in which I paid a deposit for some shares three months since, but beyond obtaining receipt for same have neither seen or heard anything more respecting it?—INQUIRER.

WHEAL FLORENCE.—In 1858 I read a very promising report of this mine in the Journal, and was induced to buy some shares in consequence, since which, I believe, one meeting only has been called, at which several shareholders wished to make a call for the vigorous prosecution of the mine, but nothing was done, and nothing has been heard of it since, to my knowledge. Will you kindly insert this in the next Journal, in the hope that some one will reply to it?—A SCRIBER.

GREAT WHEAL ALFRED.—As it has been determined to stop this mine, would you allow me to suggest the advisability of calling a special meeting of shareholders, to see if some means could not be arranged by which the point to which Capt. Trelease attaches so much importance could be fully developed. If such an arrangement could be effected, the objectants to the stopping of the mine at the present important juncture would be satisfied, and, if it should result in a failure, it would only be the means of confirming the opinions of those who have already recorded their votes in favour of stopping the mine. The expenditure necessary to prove the value of this important point would be comparatively small, while the chances of opening up an important result are very great. Those shareholders who would support the plan I propose would do well to state their opinions through your columns, and make what suggestions they might deem desirable should be adopted.—A SHAREHOLDER.

NORTH NANT-Y-MWYN LEAD MINING COMPANY.—Will the secretary of this company inform me, as well as several other of my brother shareholders, when we may expect the certificates to be issued for shares purchased, now two or three months ago? It will be a source of pleasure for those interested to know they have, from what I can learn, a highly promising and valuable mine.—A SHAREHOLDER.

CROOKHAVEN MINE.—LONDON AND DUBLIN MANAGEMENT.—In the Journal of the 10th inst., "One Interested" appears to me to be as near to head quarters as the writer of the article upon this mine and its management, under the signature of "Shareholder," in the Journal of July 6, was supposed to be. The old adage, "Save me from my friends," is applicable to each writer. A question was asked in the Journal of July 20 of the latter writer, to explain how the Dublin board could embarrass the London direction, and thus retard the mining operations, which was the charge he alleged against them, implying that as one cause of annihilating them as an Irish board. His not answering that question renders it apparent the charge cannot be sustained. "One Interested" bases the success of the mines under the present management (though it is the same now as at the beginning) to the agent's weekly reports, as being the "best reference," and also the safest index to the truthfulness of his remarks. Let those concerned answer in what degree those weekly reports are an index to be relied upon. Take, for example, the report in the Journal of May 5, 1860, when Capt. H. Thomas says—"I have nothing new to report during the past week, with the exception of having met with a strong lode in the engine-shaft, 5 fms. under the 40; from careful examination, I think this is the champion lode, and I need not say it is the most important discovery ever made in this mine. All other places are lookers well; in fact, I shall soon have a cargo of good copper ore. Now, look to the results of that so bewitching report. The cargo of good copper ore thus referred to was some 60 to 70 tons, and sold at the Swansea Ticketing, on Feb. 5, 1861, for the sum of 45s. per ton! Truly anything but an encouraging prospect for the shareholders. It was naturally to be expected the important discovery of a champion lode would result in a large yield of ore. I ask the agent, has he ever alluded to it in his weekly reports since that announcement of its discovery? If he has, it has escaped my observation. But will he inform the shareholders if there has ever been any, or say 1/2 ton of ore raised from it, now 14 months since its discovery? As to the workings at this mine being carried on with great energy, will the agent say how many more than 5 fms. has the engine-shaft been sunk since the present company began to work the mine, now one year and ten months? I am one in the Sister Isle who anticipate who anticipate the mine as a good one, but the general management I must consider to be greatly defective from some cause or other, else why has not a comparative quantity of rich ore been obtained from it as has been from the adjoining set of the Brow Head, which is on the run of the same or parallel lodes, and yielded ores that have realised upwards of 7000l. within five years' working? Energy and attention ought to produce a like result in two mines so closely situated; I leave the reader to form his own conclusions as to the cause. That a large number of shares may have changed hands within a late period may be as indicative of parties "in the secret" wishing to get out of a "sinking ship" as in fact there are others, both in England and Ireland, "not in the secret" eager to invest at 9s. per share, with 17s. I believe the fact to be, that through the lamented branch of commerce? Whence comes the chief supply, and the average price it commands in the market?—E. J. B.

cause of changing hands, and not a supposed energy at the mine inducing parties to buy. It is so very desirable to promote bona fide investments in good mines, of which there are so many in Ireland, that I regret to observe, as in this instance, statements made that would not, I have reason to believe, be corroborated by an impartial investigation by disinterested parties.—A MINING SPECULATOR: Dublin.

GREAT WHEAL ALFRED.—Mr. Kevern is too personal in his comments on Mr. Hollow; any remarks on the general business of the company are admissible; but individual censure can effect no useful purpose by publication in the Journal, or, indeed, serve any beneficial object in the present state of the company's affairs.

NORTH WALES SLATE QUARRIES.—A letter has been forwarded to "Cymro."

CHICESTH SLATE COMPANY.—We have received several letters respecting the position and prospects of this undertaking. We hesitate to publish the complaints of dissatisfied shareholders, but should recommend that the works be examined by some independent and competent agent, for whose report we shall readily afford space for the information of the shareholders generally.

ANTIMONY.—I shall feel much obliged if you or some of your correspondents can give me any information respecting the various uses to which antimony is put, and in what branches of manufacture it is principally employed? Whether the quantity consumed in this country is sufficiently large to make the importation of it a regular branch of commerce? Whence comes the chief supply, and the average price it commands in the market?—E. J. B.

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, AUGUST 24, 1861.

Perhaps on no subject has there been more discussion and difference of opinion than on the classification and mode of arrangement of objects to be exhibited in the International building next year. In the proposal first made by the Society of Arts to Her Majesty's Commissioners of 1851, in December, 1858, the Council submitted that in their opinion the objects exhibited should be "arranged according to classes, and not countries." To this proposal exception has been very generally taken, especially by Foreign Countries and Colonies, which very naturally desire to make the best collective and distinctive appearance they can, so that their individuality may not be lost sight of, nor the extent of their contributions lessened by diffusion. The exclusive arrangement in classes would be very well for Britain, France, and other large manufacturing nations, but is not at all suited to young countries, whose special object of exhibiting is to make known the extent, variety, and nature of their resources. But in this competitive age, when comparisons have to be drawn in order to arrive at the merit or value of a producer or manufacturer, it is highly desirable that, where ever possible, specimens should be compared side by side; and, without interfering with the completeness of the special collections of countries or districts, this may yet, we think, to some extent be done.

The Exhibition of 1862 will be a more important one than that of 1851, for Great Britain will have to exhibit against the manufacturing industry of the whole world, the products of so many countries having now been opened up to us in consequence of the remission of duties on manufactures. But there are some even now of our manufacturers who are so blind to their own interests as to fancy that they can keep aloof, and increase their business and elevate their position and reputation by sneering at the undertaking, and putting the invariable *cui bono*, which is so unanswerable an appeal of small minds. Thus, a Mr. J. S. WRIGHT, speaking at a public meeting convened at Birmingham in March last, "considered the Exhibitions of 1851 and 1855 enough for one generation, and should like to have heard explained the advantages to be derived from the proposed Exhibition in 1862. He was disposed to look at it in a mercenary point of view, and had no wish to adorn a show place for the aristocrats in London. If it could be shown that he would benefit by it he would go in. He believed many of the Birmingham manufacturers did not show their best patterns in 1851 and 1855; he (Mr. WRIGHT) did not, and should take care not to do so in 1862. Indeed, there were not many manufacturers who would expose their best patterns before their rivals, in order to show improvement. Such a supposition was all 'a bag of moonshine.'"

Notwithstanding the erudite opinions of this isolated antiquarian, Birmingham has sent in large demands for space, and the metal works from thence will be extensive and important. Among the speakers at this Birmingham meeting, which was presided over by the MAYOR, there was, however, much difference of opinion expressed as to the best mode of arrangement. Some were favourable to placing like goods side by side, in order that a comparison might be made. Shall we also again have, as in 1851, special Birmingham and Sheffield courts?

The coal trade are taking steps to adequately represent the staple products and manufactures of Tyneside. Mr. DOUBLEDAY, the secretary of the trade, is most active in the matter. Mr. HOWARD, Commissioner of Woods and Forests, has approved of the proposition of forming a collection of the coal, stone, and other minerals of the Forest of Dean. The collection will consist of specimens of each of the working seams of coal, of the different kinds and colours of stone, dressed and undressed; of the iron ores with the iron manufactured therefrom, the clays, and the articles made from them, and other minerals, all to be illustrated by geological maps and sections of the strata of the Forest.

In a memorial extensively and influentially signed by owners of mineral property, producers, manufacturers, and others, presented to the Royal Commissioners in April last, it was suggested that any plan of arrangements should admit of the various minerals and mineral manufactures being so placed as to afford ready comparison of similar productions, and also of raw materials being exhibited, as far as possible, in direct relation with the various manufactures they are used for. To this the Commissioners replied that there would be nothing to prevent the memorialists from giving effect to their own wishes, of exhibiting specimens of like minerals together for the purposes of comparison, and of accompanying them with illustrative manufactures, models, diagrams, &c. Such a work must, however, be done by the exhibitors themselves. The Commissioners added that they would be glad to hear that the proprietors and workers of copper mines, for example, had entered upon some united course of action for exhibiting samples of copper from all parts of the United Kingdom, in a systematic series, and of inducing copper-smiths and other manufacturers of articles produced from copper to exhibit their manufactures in juxtaposition, and in illustration of the employment of the raw material. Should it not be practicable to induce manufactures thus to give up their manufactures for the purpose, another course would be for the mineral producers to furnish the manufacturers of copper goods with samples of the raw materials, and to induce them to place the samples with the manufactures. It will be obvious, however, that as the manufacturers in copper may be more numerous than the producers of the raw material, it would not be necessary that each manufacturer should exhibit raw materials obtained from similar sources. All such mutual arrangements, however, must be voluntary, and must be organised independently of the direct action of the Commissioners, who, whilst they will be happy to afford any assistance in their power, cannot enter upon the cost or responsibility of making them.

The *Neath Gazette*, the representative of a large manufacturing district, advocates very strongly the system of classification. "The impression," it observes, "left on our minds after visiting the Great Exhibition of 1851, was, on the whole, one of disappointment that a great deal more had not been done; that with such vast resources at hand some attempt had not been made to bring together similar raw materials and products from different countries, so as to be enabled easily to compare them. This omission was excusable in an exceptional Exhibition, such as that of 1851, when the time for arrangement was so short, and the experience so small, but the repetition of such want of classification in the coming Exhibition would, we are sure, be a matter of great regret to many thousands, including among them some of the largest exhibitors of 1851. We may quote an instance in the former World's Fair where such classification was to some extent carried out, but only by a private individual. Mr. BLACKWELL, of Dudley, exhibited a classified collection of iron ores from all parts of the United Kingdom, and what was the result? One that comes particularly home to us—that an ironmaster of this district discovered that he had been for years throwing away enormous quantities of a very valuable article, spathose iron ore, from which some of the finest quality of iron is now manufactured. Why should not the same opportunities be offered in the coming Exhibition in all the departments? It may entail additional outlay, and great additional trouble on the part of the Commissioners, but we feel sure that this would not deter them, if they could be convinced that the exhibitors themselves desired it. There are two classes who will send articles to the forthcoming Exhibition—those who exhibit for their own benefit, and seek to advertise, and those who exhibit solely for the advancement of knowledge. With regard to the first, how much fairer would it be to each competitor to have his productions placed side by side with his

rival, so that the judges, whether jurors or the public, may have every facility offered them for forming a correct judgment, and not have their memories unjustly taxed in carrying from place to place the qualities of each object under examination. Those who exhibit for the advancement of Science, and we are happy to find among them some of the largest manufacturers of this district, would without hesitation lend their aid to any arrangement which would facilitate an easy reference for educational purposes to the various classes, and thus assist in the object they have in view. From the remarks made on the last Exhibition, and from the general wish in the public mind to be instructed as well as amused, we think that the universal opinion would be in favour of some classified arrangement."

Systematic and orderly grouping, fairly carried out in detail, are most desirable. The points urged by Prof. ANSTED, in his paper read before the Society of Arts in March last, were the absolute necessity of real order in the grouping or display of products, and that great facility of comparison should be one of the characteristics of the method of arrangement adopted. There was no department, he urged, in which definite order and plan are more necessary for a fit exhibition of the resources of our own and other countries, and a proper comparison of them, than that of minerals and mineral manufactures. The principle of separating the bulky, more common and less costly articles of mineral origin or manufacture, from those which are comparatively small in the quantity obtained, valuable in proportion to their bulk, rare in their distribution, and costly in their preparation and use; that raw materials should form, in most cases, the fundamental objects in series illustrating manufacture, and for other uses; and that all the collections of minerals and mineral manufactures from different countries and districts should be placed where they can most conveniently be compared with similar objects. In the last Exhibition there was little unity of expression and great confusion in the arrangements, arising, in some measure, from want of previous knowledge and proper supervision, great haste arising from the late period at which many of the articles arrived, and want of proper allotment and arrangement of space. Thus parts of the English collections were in the south-west corner, in the nave, in some bays in the northern side of the building, and some outside. The subdivisions in the different countries were by no means the same, and in many cases no grouping at all was attempted. The importance of the exhibited manufactures being in all cases accompanied by and illustrating the raw material of which they are formed, no one can doubt, and any general arrangement by which such a combination can be accomplished would be highly beneficial and interesting. Prof. ANSTED admits the advantage of obtaining the services of exhibitors to arrange for themselves, and to elect for themselves where their collections shall appear; but this is by no means inconsistent with the establishment of a system by which the framework of arrangement is so far secured that the exhibitor can hardly fail to put himself in the right place. Without this days may be wasted in the vain attempt to compare the similar manufactures of different exhibitors, or obtain an idea on any subject that may lead to useful results.

Baron STENBEL, the Royal Commissioner for Wurtemberg to the last Exhibitions of London, Paris, and Munich, in a very practical communication to the Society of Arts, recommends that each country should be bound to take up as much as possible the whole breadth of the building, and to adhere to the prescribed order of succession of classes from the right hand to the left; then everyone in walking in the direction of the length of the building will be able to trace out the kindred articles, and in walking in the direction of its breadth to follow after the products of the several countries. Much the same principle was adopted in the arrangement of the Exhibition of 1851, and if this should be carried out more completely the Exhibition of 1862 will offer all the requisites which, from such a display of industrial products of all nations, can fairly be expected.

We have no desire to advocate or urge forward any particular system of classification or arrangement, whether that of Professor ANSTED or any other, but merely desire to see the subject more generally taken up and discussed, as respects British producers and exhibitors at least. All we wish for is to find the great bulk of the articles—raw materials at all events—so arranged that a producer, manufacturer, member of the press, or any other individual who wishes to collect information in any particular department, may be enabled to do so with facility, and not be obliged to walk miles and wade through volumes of catalogues in the vain attempt to bring together in the mind similar objects, so widely distributed as they were in the Exhibition of 1851.

The arrangements with regard to the classification of the materials to be exhibited at the forthcoming International Exhibition, and belonging to the department which comprises Mining, Quarrying, Metallurgy, and Mineral Products, are progressing as speedily as possible, and as it is finally decided that all applications for space must be made before Oct. 1, it may be well to refer to a circular which will be shortly issued by Mr. F. R. SANDFORD, the secretary to the Commissioners. The committee for the class with which our readers are most intimately concerned have drawn up a scheme, with a view of suggesting to some extent the nature of the objects which it is thought desirable should be exhibited.

It is proposed to represent Mining and Quarrying operations by the exhibition of drawings and sections, showing the relations of the minerals to the rocks in which they occur; plans and sections and models of the workings of mines and collieries; models or drawings of machinery employed for ventilation, draining, raising minerals, lowering and raising miners, stamping and crushing ores, and washing and dressing ores; and tools and other appliances. Geological and mineralogical maps, plans, sections, or models, are also thought desirable.

The non-metallic minerals will be represented by coal and minerals used as fuel (comprising bituminous coal, Cannel coal, and Torbanite, anthracite, lignite, peat, bituminous shales, native naphtha, pitch, bitumen, &c.); clays and felspathic minerals (comprising porcelain clay or kaolin, china stone, potters' clay, pipe-clay, brick clay and brick earth, &c.); building stones of all varieties; slates and slabs; paving stones, &c.; sands for glass-making, &c.; cement stones and cements, limestones, &c.; rotten stone; fullers' earth; fluor-spar; barytes, strontian, and other minerals employed in the arts; coprolites and other mineral manures; salt; gems; stones used for ornament; millstones, grindstones, hones, &c.

Amongst the metallic minerals will be found the various ores of iron, including magnetic oxide, hematite (anhydrous red oxide), specular iron ore, brown hematite (hydrated oxide), spathose ore, hydrated oxides, carbonates (argillaceous carbonate, blackband, hydrated oxides of the carboniferous formations), coal brasses of coal measures of South Wales, mixed carbonates and hydrated oxides; and silicified iron ores; of copper, including native oxide, carbonate, sulphides (grey ore, yellow ore, &c.), and other varieties which enter into commerce; of tin, including oxide, tin pyrites; of lead, including carbonate, sulphides, and other varieties used in the arts; of silver, including native, sulphides, chlorides, argentiferous gossans, &c.—it is especially important that attention should be directed to these; of gold, including gold quartz; of zinc, including carbonate, silicate, sulphide; and of sulphur ores (pyrites of metalliferous veins, ditto, of coal measures—"coal brasses"), as well as those of cobalt, nickel, uranium, tungsten (wolfram), arsenic, and manganese. As to metallurgy, it is desirable that models of furnaces, and examples showing the several stages of the particular processes, with illustrations of the varieties of the metals known in commerce, should be exhibited.

The committee state, and we believe that the statement will be very generally concurred with, that it is in the highest degree important that the great mineral interests of this country should be fully represented. This can only be done by individual exertion, guided by unity of action, and this impression has induced the committee to submit for consideration an outline plan, in which they indicate such varieties of commercial minerals as they believe may be advantageously exhibited. They leave the filling in of this design to the judgment of intending exhibitors, upon whom they rely for devising the most perfect methods of representing their own industries. The committee, however, suggest the desirability of keeping the size of mineral specimens within moderate limits, as being more convenient for display, and better adapted for exhibiting special peculiarities, than unwieldy masses. This does not, of course, apply to any remarkable examples, such as sections of lodes, or peculiar and illustrative phenomena. They also recommend that, where building stones are exhibited in the form of cubes, the uniform size of 8 inches should be preserved, and it is deemed essential that two surfaces of the cube should be left in the natural state—undressed. These and all mineral specimens should have labels attached, carefully giving the locality from which they were obtained, and, if possible, the geological formation to which they belong.

The committee desire to see models or drawings of the most approved methods adopted in working our mines and collieries, of the machinery employed for draining, for ventilation, and for winding, and also of the

improvements which have been introduced for preparing minerals for the market. They also hope to see good illustrations of the metallurgical processes employed, and of the commercial results obtained.

APPLICATION OF EXCAVATING MACHINERY TO MINING.

All the world were incredulous when Stephenson offered to construct an engine that should travel at the rate of 20 miles an hour; and a prominent Member, of admitted ability, in our House of Lords stated that "he would eat the first steamer that ever crossed the Atlantic." The results we know; but these simple facts seem to dwindle into insignificance in the face of the prodigies of progressive skill now displayed daily in science, engineering, and mechanism. We waft our thoughts in the form of telegrams over the face of the earth; we travel at such a speed as our ancestors never dreamt of; but we now live in such times that the accomplishment of any object which hitherto has appeared impracticable merely induces us to exclaim, "We wonder it has never been done before!" To our material minds we only seem to realise the value of an invention when once adopted, as we come to consider what our position would be if there were a probability of our being deprived of the use of it; but, nevertheless, we cannot but feel sensible of the benefits conferred on mankind by the substitution of machinery for manual labour.

It is, therefore, with a sense of performing a pleasurable duty that we direct particular attention to a new invention, referred to in a letter to be found amongst our Correspondence, headed "A New Era in Mining," and written by a gentleman who has had a life-long mining experience; and we hail with satisfaction the accomplishment of an object hitherto regarded with a notion of its impracticability, on account of some stubborn engineering and mechanical difficulties which had to be contended with. These have been overcome, and we have no hesitation in expressing our conviction that its success will work a thorough revolution in the whole system of mining. By providing the power of calculating the time and cost to explore a certain depth and extent of ground, speculation in mining will be assimilated to commercial pursuits, with this unmistakable advantage—that when the ground has been once carefully and judiciously selected, and operations properly and systematically carried out for its development, there would be far less chance of unsatisfactory results than are met with by merchants and manufacturers in the usual routine of their business. As this important invention must beneficially interest the landowners, mine proprietors, merchants, and miners, we opine that it will meet with immediate adoption.

THE CLAY CROSS COLLIERY ACCIDENT.—The steps taken by the inhabitants of Chesterfield and the neighbourhood for collecting subscriptions in aid of the widows, orphans, and families of the sufferers by the recent calamity at Clay Cross has, we are glad to find, been attended with much success—the first list, a copy of which will be found in our advertising columns, showing that subscriptions to the amount of 1428*l.* 2*s.* have already been received. At the public meeting at Chesterfield, on Aug. 9, over which the Mayor of Chesterfield presided, Mr. George Barrow was requested to act as honorary secretary, and trustees and a committee for distributing the funds were appointed. Subscriptions may be forwarded to the Mayor (Mr. Shipton), to any of the Derby or Chesterfield bankers, or to the honorary secretary.

COMPRESSED FUEL.—Mr. A. G. Lasserre, Bordeaux, has patented an invention for compressing peat, or small or waste coal, coke, and anthracite. The matters to be agglomerated are first heated in an oven, and mixed with a small proportion of pitch, tar, or resin, the mixing being effected by the aid of a shaft furnished with arms or bars placed within the oven. They are then formed into balls or blocks. A wheel is provided with 28 holes, made to receive a similar number of pistons, so fitted as to play freely. This wheel receives circular motion by means of toothed gearing. The material to be agglomerated runs continually through a hopper, aided by a butterfly-wheel, and fills the cavity between the two opposite pistons, which are to compress it. The wheel in its rotation carries with it the material and the pistons, which carry at their extremities rollers, which pressing against inclined planes force the pistons to come in contact, so that the materials lodged in the hollow spaces at the end of the pistons is compressed between them. After the pressure has been exercised, the axles of the rollers come against cams, when the pistons retire, and the ball or block falls. To avoid adherence of the ball to the sides of the piston-spaces a second piston inside the first exerts (as the pistons begin to separate) a pressure, which completely isolates the ball from the other pistons. The material may be raised to the hopper by any mechanical means. A pump may be placed so as to inject water into the pistons, to wash their interior, detaching matter that might otherwise remain, and preventing the balls, lumps, or masses from sticking together. When this fuel is intended to heat apartments or for domestic purposes, Mr. Lasserre proposes simply to steep the matter in a bath of argillaceous water, to avoid the disagreeable smell of the gas contained in the coal, tar, pitch, or resin. The agglomeration will be effected as readily, and in combustion the fuel will be almost smokeless.

Puddled Steel.—The Institution of Mechanical Engineers have held their meeting. Elaborate papers have been read on cast-steel, Bessemer steel, and the effect of carbon in combination with iron, but not one single allusion has been made to that process which supplies the greater part of the mechanical industry of this country with their steel,—that process known and worked abroad long before it excited any attention at home, and even at this time superseding and replacing cast-steel for most important practical uses, and even if not used in England by English firms for such uses, still it is brought from France and Germany, and is in use equally the same. What is puddled steel? Mr. Fairbairn says—"Puddled cast-iron—the process of decarburization being stopped before all the carbon has been eliminated." At Rive-de-Gier, France (Petin, Gaudet, and Co.), the mixtures for puddled steel vary with the uses for which it is required. It (to a certain extent) supersedes cast-steel for cutlery, side-arms, inferior tool steel, crinoline steel, and spring steel; and at St. Leuvin, Bordeaux, Messrs. James Jackson, Son, and Co. manufacture not only the articles named above by the above-mentioned firm, but have immense orders on hand for railway carriage springs, which are unsurpassed, and can compete with our own manufactures in England. We hear of Mr. Clay, the Mersey Steel Works, and Firth's puddled steel; but why all this secrecy? Is there no puddled steel manufactured in Sheffield, and why is it not made known? We cannot for a moment believe we are behind any one country in the world in steel manufactures, and yet the complete ignoring of this branch of manufacture would lead us to believe so. Let us see why this is. It is no secret that scarcely two pigs of iron run from a furnace will be precisely similar on analysis; and as several qualities or mixtures are used in making puddled steel, so is there a difficulty in obtaining a uniformity of quality, and this often deters manufacturers from following up this remunerative branch of manufacture. For no one can deny that puddled steel is cheaper than any other, at least at the present time. Its uses are multifarious, and it only requires the aid of the chemist, and a little careful attention, to bring it to perfection. About 50 per cent. of grey malleable pig-iron, 40 per cent. of white iron, about 15 per cent. of manganiferous pyrenean, or Prussian spiegel-eisen, with 5 per cent. of manganese and salt, compose a mixture which will produce a steel fit for almost any purpose, and at a reasonable rate, whilst those puddled steels in repute in England at the present moment reach to almost the price of cast-steel. Seeing, then, that steel of a uniform quality can be made elsewhere for any purpose, and at moderate rates, we would earnestly direct the attention of our steel manufacturers to this much-neglected branch of industry.

IMPROVED REGULATING VALVE.—An improved apparatus for regulating the flow of gas, which has for its object the equalisation of the pressure of gas as it flows from the gasholder to the burners, and which will be found more particularly applicable when employed to regulate the flow of gas under heavy pressure, such as when portable or compressed gas is used for illuminating purposes, has been invented by Mr. D. H. Williams, of Pittsburgh, U.S. The gas under pressure is conducted from the gasholder by means of a pipe provided with a peculiarly formed cock or valve to a chamber, from whence, when the pressure is diminished to the proper amount, the gas passes through another aperture or pipe to the burners. The cock or valve which regulates the admission of the gas to the chamber is constructed on the rotary principle; it is made of a conical form, and, of course, is fitted to a seat of corresponding form. A passage is made along the axis of the cock to the centre, where it meets with a transverse passage, which conducts the gas in opposite directions to a chamber made outside the cock in the seat. Another transverse passage is made in the cock parallel to the former, and communicates with an exit passage, also in line with the axis of the cock and with the entrance passage above mentioned. By this means the gas is made to pass upon both sides of the cock alike, and consequently, a balance of pressure on the cock is obtained. The seat of the cock is made movable thereon, and is connected by a lever or arm and a rod with a spring box or elastic medium, which is adjusted to a given pressure. Upon gas being admitted through the

regulating cock or valve into the chamber, the pressure being exerted upon the elastic sides of the spring box, the latter will be collapsed thereby, and will, consequently, tend to close, either wholly or partially, the entrance valve or cock until the pressure is reduced, when the elasticity of the spring box will again open the valve and allow the gas to flow in. The interior of the spring box communicates with the external atmosphere by means of a tube, which passes through a stuffing-box to prevent the gas from escaping from the chamber. An adjusting screw is adapted to the tube of the spring box, so that the apparatus may be regulated to allow the gas to pass through at a given pressure. He prefers to construct the spring box or the elastic medium thus:—The discs of which the box is made are constructed of thin sheet-brass, which is wound-up in a convolute coil, and covered over with some elastic air-tight substance. The discs are slightly hollowed out and soldered together at their edges. The valve is placed on the supply-pipe, between the gasholder and the regulator.

REPORT ON CORNWALL AND DEVONSHIRE.

[FROM OUR CORRESPONDENT IN TRURO.]

AUG. 21.—Copper mining has been sadly going back in West Cornwall for some time past. The old mines have been steadily deteriorating, and for a considerable time no new ones have been springing up to supply their places. The copper mines of the eastern part of the county are getting far ahead of those of the west; and, instead of there being no copper "east of Truro Bridge"—the old mining notion—it would almost appear as if the converse of that proposition was not unlikely to become the more correct. The old copper mines must, sooner or later, come to an end, and if other discoveries of that metal are not made the western division will soon be relying almost wholly upon tin. The advent of a new copper mine to the Dividend List is, therefore, a matter of some importance. NORTH DOWNS has this week commenced dividends, which, judging from the reports, and the general good prospects of the mine, are likely to be continued for some considerable time at least. The account meeting of this mine was also particularly characterised by the presence of a large number of shareholders from Liskeard, in which town a large interest is held. The Liskeard people have been very lucky of late years, their district being now the best copper district in the kingdom; and, in the case of North Downs, it would seem as if they had brought some of their luck west with them. It is to be hoped that this will induce them to venture further in the western division, for it is not easy now to find another such body—so influential both in character and wealth—who hold so well together, and who, altogether, are so well able effectually to promote the interests of any concern, or of any district, which they take in hand. It must have been very satisfactory to Mr. Pryor and Mr. Dunsford to have received such flattering testimony of the value of their exertions in working North Downs up to its present position, from gentlemen so well capable of judging as the Liskeard adventurers. North Downs is not the ground formerly worked under that name, which lies on the other (east) side of the great county cross-course, and is now included in North Downs and Wheal Rose sett. North Downs lies on the west side of the county cross-course, which separated it from and forms the boundary between it and Briggan Mine. The lodes now working on are, no doubt, the Briggan lodes, but the North Downs sett also includes the old Wheal Peever Mine, to the south, which has the North Downs and Wheal Rose lodes. Wheal Peever is not now working, but it is a piece of ground which will be some day available for the North Downs shareholders, when the working of North Downs and Wheal Rose shall have drained the ground. West from the great cross-course, North Downs sett extends about 400 fms. in length to the neighbouring valley. The great county adit crosses the sett, coming in about 40 fms. deep from surface.

The present workings of North Downs are very interesting in a mining point of view. The principal workings on the main lode, which underlies south about 1½ ft. per fm., are between two cross-courses, which are about 100 fms. apart at the surface, but which come together rapidly in depth, in consequence of their underlying towards each other. Bennett's, the eastern cross-course (the same as the stoney cross-course at Wheal Peever), dips west; and Towan's, the western cross-course (same as Butcher's cross-course at Wheal Peever), dips east. About 40 fms. south of the lode, and nearly parallel to it, is a large elvan course, underlying north towards the lode nearly 4 feet per fathom, so that the lode and elvan are also dipping towards each other.

King's engine-shaft was pitched at the surface about a dozen fathoms east of Towan's cross-course. The main part of this cross-course seems to have passed through the shaft about the 20 fm. level below adit, or about 60 fms. from surface; but some western branches have since been intersected, going down almost perpendicular; one of these is now, and has been for some time, in the shaft disordering the lode. From the surface to the 30 the shaft is perpendicular, but below the 30 it is on the curve of the lode. In the 30, the lode makes in two parts, and in this level the ore was first cut in the mine during the present working on the south part of the lode. Under the former management this level was driven on the north part of the lode, which was wholly unproductive, and it was by cross-cutting to the south part that the ore was found. In the 40 the two parts of the lode come permanently together, and below this a fine course of ore has been met with, worth at points 100*l.* per fm.; the 50 fm. level having for the last 20 fms. gone through a course of ore worth on an average not less than 60*l.* per fm.; the end is now worth 70*l.*, and extending downwards as far as yet seen. The 60, coming up east from the engine-shaft, will soon be again under this shoot of ore. But, besides this course of ore between the two cross-courses, there seems every prospect at the present time of finding valuable courses of ore at the east and west ends of the mine—that is, east of Bennett's cross-course and west of Towan's cross-course. Bennett's cross-course breaks up the main lode, and heaves it about 24 fms. south, where, on the east of the cross-course, it is found to make in two lodes, about 18 fms. apart, in the 20, but approaching in depth at the rate of about 2 fms. in every 10. These are called Pryor's lode and the south lode. Ore was first cut on Pryor's lode in the 20 in a cross-cut (13 fms. long) from Bennett's shaft. In this level the ore made pretty nearly from Bennett's cross-course up to the great cross-course, a length of about 60 fms., and nearly up to the 10; not very rich, certainly, but a lode worth from 12*l.* to 20*l.* per fm. In the 30 this ore failed to a great extent; but in the 40, under a slide, which can be traced all through the mine, and seems to have been connected with making most of the ore, the lode has greatly improved, the end for the last 10 fathoms driving having been worth fully 100*l.* per fm. Indeed, in this level Pryor's lode and the south lode seem to have come together in the same manner as the north and south parts of the main lode came together in the same level on the western side of Bennett's cross-course. If the coming together of these lodes here should have the same effect as they had on the main lode, it would seem as if the 40 here was also on the top of a bunch of ore; if this should prove to be the case, and if a 50 fm. level in this part of the mine should turn out anything like the same level between the two cross-courses, of course it will be a thing of immense importance; it really looks as if it were going to do so. In order to develop this ground, Bennett's shaft, now down to the 40, must be sunk as soon as possible to get a 50 fm. level; this can be done as soon as the 50 from King's engine-shaft is sufficiently forward to drain the ground.

In the western part of the mine, west of the engine-shaft and of Towan's cross-course, the prospects also are good. The 50 fm. level here, which is driven upwards of 30 fms. west of the engine-shaft, has a lode worth 20*l.* per fathom. There is no level over this, the 40 being some fathoms behind, when suspended having stones of ore in the end. The 60 is only about 3 fms. west of shaft, but will soon prove the value of this ground.

The North Treskerby run of lodes, which is the run north of the Briggan run, also traverse the North Downs sett, and are now being cross-cut for in the 30, near Bennett's cross-course. Another parallel lode, about 85 fms. south of the main lode, but underlying north, is called the Coal-yard lode, and has been cross-cut in the 10 fm. level. The present working of North Downs was started about five or six years ago, and has been under Mr. Pryor's management about four years. There can be no doubt that he has done a great deal here in the time, and shown great skill and judgment in the working of the mine. It is a characteristic, I believe, of this north district for the lodes to make good deposits of ore as they come in contact with the elvans, and there is good reason to suppose that the fine bunch of ore now in North Downs is due to the same cause. The lode and elvan dipping different ways, the former is now coming in contact with the latter, and in another level or so will be entirely in it. If the eastern and western ground should at all turn out like the ground between the two cross-courses, we may expect to see the North Downs lode turn out, within the next two or three years, great quantities of copper ore from the vicinity of the elvan course. The mine is in excellent working order. There is a 60-inch pumping-engine, and a 24-inch double for winding and crushing, with railways laid down at surface, new floors made, improved pitwork fixed, deep adit cleared out for discharge of water, and, in fact, everything done to enable the mine to be worked to the best advantage in every respect. Capt. John Grenfell is the principal agent, under Mr. Pryor. The sittings of the Stannary Court have been held during the last week,

* The more important commercial varieties should be exhibited with chemical analyses, statements of heating power, and physical peculiarities.

but have presented no point of interest. Several decrees have been made against mines, but they were mostly unopposed. An application was again made by Mr. George Goodridge, of Park-street, Regent's-park, London, the holder of 21 1-23,720th shares in Wheal Vor, to inspect the books, &c. At the former sittings Mr. Goodridge made a similar application, which was refused. The present application seems to have been made upon grounds which professed to be different, but it received no more favour from the Vice-Warden, who again refused it; so that Mr. Goodridge's spirit of enquiry is nipped in the bud, and he will have to be content to leave his interest in Wheal Vor—1-10,000th part of the mine seems to be the nearest fraction capable of expressing it generally—to the care of Mr. Noakes and the committee. In such cases costs are not usually granted, which is rather hard in a case of this kind, where Mr. Noakes had to come from London to oppose the application. His Honour seems to see this, and has intimated that, in future cases, he may find it necessary to make some condition as to costs where applications of the kind are made on such slight grounds as seems to have been the case on the present occasion. So that shareholders of an enquiring spirit, holding 1-10,000th part of a mine, must be in future a little careful, or they may find themselves let in for very serious costs.

REPORT FROM MONMOUTH AND SOUTH WALES.

NEWPORT, CARDIFF, AND SWANSEA, AUG. 22.—The Coal Trade generally is in an active condition, and the exports for the past three months show a considerable increase over the previous three months. Much has been said about the slackness of trade in connection with the two staple commodities of the district, but, so far as the coal trade is concerned, the exports for the past three months prove that it has hardly felt the general depression which has closed so many furnaces, and thrown so many thousands out of employ.

There is little new to report in reference to the Iron Trade, but, as far as may be judged from indications, better times are evidently near. Last week the Aberdare Iron Company put a monster furnace under blast, and they have two others of a similar size nearly ready to undergo the same operation. The Rock Colliery, Blackwood, the property of Mr. D. Thomas, Cefnycyrib, is now in full operation. The colliery is worked by a plant, and the produce amounts to about 60 tons per day. The coal is shipped principally at Newport. Mr. Thomas has also made a contract to supply the South Wales Coal Company with 1250 tons of Cefnycyrib coal per month for the next three years.

Mr. Evans, the Government Inspector of Coal Mines for South Wales, has just instituted proceedings against Messrs. Morgan and Perkins, the owners of the Lynch Colliery, Gower, for violation of the Mines Regulation Act, by which two men were recently killed.—On Saturday last a lad named John Lewis, 15 years of age, who was employed in the Gelly pit near St. David's, Llanelli, got on one of the trams which was loaded with coal, and was at the time descending the incline. The unfortunate lad in some way got jammed between the coal and a low part of the roof. His screams brought some men to his assistance, when he was extricated from his perilous position and carried to his home at Llansennech. His collar bone was split, and he was much bruised, but he is progressing favourably under the care of Mr. Thomas, surgeon. The Rhonda Valley has now become one of the most important districts in South Wales. The pits throughout the valley have yielded enormous profits to the proprietors, and sinking is still continued with considerable activity. The Messrs. Jones have just won the No. 2 vein, at Coedca Colliery, and they have commenced sinking to the No. 3 vein. The Dinas and Cymmer Collieries are in full work, and there is every prospect of things continuing in the present buoyant state.

A turn-out has taken place at Abercrombie, in consequence of the men demanding an increase of prices. This is rather a strange demand in these times of depression and short work, and it is quite evident that the act of the men will recoil upon themselves, to their great disadvantage. The success of the Risca colliery seems to have been the chief cause of the strike at Abercrombie, the men at the latter place claiming that they ought to receive the same prices as the workmen at Risca. We understand that a considerable number have resumed work, although the majority still hold out.

The adjourned meeting of the Risca Relief Fund Committee was held at the Town Hall, Newport, on Tuesday last. The Rev. Augustus Morgan occupied the chair, and there were also present Messrs. Lionel Brough, Government Inspector of Mines; D. Morris, Risca; John Evans, Risca; Thomas Phillips, Llanelli; C. B. Fox, Newport; Rev. Howell Williams, &c. The accounts were examined and adopted, and several fresh applicants were placed on the list for relief. It was suggested that the present weekly allowance to the widows and children be increased, but no definite resolution was come to on the point.

A difficulty has presented itself in reference to the working of the Llangan Silver-Lead Mine, Bridgend. In a previous number of the *Mining Journal* it was stated that Mr. John Robson and Mr. Humby were about commencing to work the mine. Since then notices have been served on each of these gentlemen, as well as upon their solicitor, Mr. J. Morgan, by Mr. J. Kesell, who holds a lease of the mine from a gentleman in the neighbourhood, and who will not give up his interest until he is reimbursed the outlay he has made upon the works. It is to be regretted that a proper understanding is not arrived at, for there can be no doubt but that the mine would eventually be a paying one to the proprietors, and it would afford employment to a great number of hands.

The Newport and Cardiff shipping trade remains about the same. Coasting freights are higher at Newport. A large number of vessels have arrived at the Penarth Roads, and this it is expected will influence the upward tendency of the freight market.

THE RISCA EXPLOSION.—William Derrick, who was an underground officer at the Black Vein Pit previous to the late calamitous explosion, and a witness on the inquest, has forwarded us a letter, in which he complains that certain statements made by him, and which he maintains are true, have deprived him of employment and of the means of support for his family. His letter is accompanied by assertions of a very reflective character upon his superior officers, and which contains a long series of comparative statements of circumstances as they were stated to have existed at the time of the explosion, and those which Derrick contends really did exist. One very serious accusation is, that the evidence given that before the explosion there was no danger on the doors was false, and that, after the explosion the wind was turned up Bedlington's deep, along the first east level, up No. 4, and back to the ventilator—the result being that the pressure was immediately taken off the doors, and the Government Inspectors led to believe that the roads must have been in excellent condition before the explosion. We shall be glad to forward the document to the Inspectors or the coroner, should they desire it, or think it might be useful.

REPORT FROM YORKSHIRE, DERBYSHIRE, AND LANCASHIRE.

AUG. 22.—We are not enabled at present to announce any improvement in the position of the Iron Trade in these counties, though there are several large houses in Yorkshire who have received a better supply of orders from the Continent. The home demand is light, and the rates obtained for merchant iron are such as to leave scarcely a remunerative profit upon the majority of transactions. There is a prevalent impression that the rates for labour will have to be modified until a resumption of active business should result, and in respect to this matter several large establishments have reduced the wages paid to the men. The pig-iron trade is dull, and altogether the position of the trade is exceedingly unsatisfactory, more especially as regards the trade with America.

The Coal Trade is comparatively active, considering the season of the year, and the depression existing amongst the manufacturing industries of the country. Mr. Morton, Inspector of Coal Mines, reports that above 8,500,000 tons of coal were drawn in Yorkshire last year, and happily the number of persons killed at the collieries was but fifty, or one death for every 170,000 tons raised. This is the smallest actual number of deaths in any one of the last ten years, although in that period the number of collieries has increased from 260 to about 400. Yorkshire contrasts very favourably with the average of the whole kingdom in regard to these accidents, but the Inspector has to report that nearly all the fourteen deaths ascribed to explosive gas might have been prevented by locked safety-lamps, properly and fairly used, and that many of the other deaths were preventable, and might have been avoided by the exercise of reasonable vigilance, common prudence, and ordinary skill.

The subscriptions in aid of the sufferers by the late calamity at Clay Cross are making satisfactory progress, and now no doubt remains that all who have suffered by that fearful accident will be permanently provided for in a pecuniary point of view. The Duke of Devonshire has subscribed 50l., and, indeed, the appeal has elicited the sympathy of all classes. The company have always been distinguished for liberal management, and, notwithstanding the most searching investigation of the coroner and jury, they have been held perfectly blameless. The committee who are to have the appropriation of the fund are gentlemen of the highest standing in society, and it must be a source of great gratification to the company to find that all the neighbouring coalowners have subscribed to the fund, clearly demonstrating the esteem in which they are held by their neighbours.

The position of the Derbyshire lead mines is somewhat duller and less hopeful than was the case a short time ago. The Mill Town Company have abandoned the old shaft, and are sinking a new one. The North Derbyshire Company have temporarily ceased the sinking of the shaft, and the Cawdor Mining Company, at Matlock, have set down the mine, and are taking up the plant. There appears to be a paucity of mineral enterprise just now, which may be mainly owing to the depression in trade, and particularly in the trade of Sheffield, from which town Derbyshire lead mining has received great support.

The Mill Dam Company, on the 9th inst., measured 73 loads of ore, which would weigh from 17 to 18 tons, the produce of six weeks, their previous measure having been made on June 28. Although the weather during the last six weeks has been very favourable for mining in the Peak, and there are from 60 to 70 men and boys employed at the mine, the quantity of ore got scarcely averages 3 tons per week. Some of the shareholders continue to express their surprise at the last call of 5s. per share having been necessary, but if they will only calculate the amount required to meet the wages of so large a body of workmen, in addition to the bills for coal, powder, timber, and other charges attending the reparation, and renewing of the machinery and tools, they must see they have no reason to be surprised, considering the small quantity of ore the mine yields, which is also subject to the payment of the royalty and mineral dues. There is more reason for the comments made upon the inaccuracy of the quotations in the share list published in the local papers, where the paid-up capital on the shares in this company continues to be stated at 55s. per share only, although the call of 5s. per share ordered to be paid in June last raised it to 21s. per share.

Derbyshire bids fair to rival Staffordshire in the manufacture of ornamental tiles for floors. A manufactory has been commenced at Ashover, and though at present conducted on a small scale, it will in the course of a short time become extensive. It has been found that a very handsome and durable tile can be made at a cheap rate, and we

feel confident these tiles will, for all practical purposes, prove equal to Minton's, whilst they will be materially cheaper in cost.

The new coal company, which was alluded to a short time ago as being formed at Sheep-bridge, is not making much progress in a public way, whatever may be doing privately. We hope it will not share the fate of its predecessor—"the Whittington Coal Company," for which a large amount of capital was subscribed, but it fell through, owing to some misunderstanding amongst its promoters. We heard it said that the sharks were too numerous, and that they battled about the prey, in the midst of which the great prospectus was swallowed, and the company came to a mysterious end.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

AUG. 22.—The Iron Trade continues to present indications of the slight improvement previously described, which, however, must not be taken to extend further than a trifling increase in the orders, partly arising from the better prospect which the crops have presented during the last few weeks, and to the general necessity for purchasers to replenish stocks. There is a slight mitigation in the dullness long existing, but the change would be considerable from the present to a state of fair activity. Pig-iron is quite as firmly held as it was, and some sales are taking place; there is, however, no indication of any probable advance for the present.

The Coal Trade is extremely flat over the whole of the country. The great extent to which the blowing-out of blast-furnaces has proceeded, with the consequent reduction in the make of finished iron and of the consumption of coal in both cases, naturally produces this result; but the consumption of coals for other manufactures and for domestic use is also very large, and the general depression of trade reduces the demand on these accounts, as the manufacturers do not require so much, and the poor are compelled to stint themselves in fuel as well as in other comforts. At a very large proportion of the collieries of South Staffordshire the men are not working more than three days per week. At the Brownhills Collieries, on Cannock Chase, the reduction of wages, which has been elsewhere acceded to, is resisted. In the Hardware Trades a degree of improvement is reported, but this arises mainly from foreign orders, which keep up fairly. The better prospects of the harvest, and the lower rates of discount, are operating favourably, but the manufacturers are still very short of orders, and the men, especially in the lock trade, are compelled to be content with only a portion of a week's work. As stocks have been increased, in order that the workmen might be kept together, some time must elapse before these trades become active.

The success of local wagon companies has been repeatedly noticed in the *Mining Journal*, and another illustration was afforded by the report of the Midland Wagon Company, presented to the sixteenth half-yearly meeting, on Wednesday, at the offices, Birmingham. Mr. W. Owen, Chairman of the board of directors, presided. The revenue for the half-year was 20,744l., against 18,328l. for the six months immediately preceding. After paying a dividend on the whole of the stock of the company, at the rate of 10 per cent. per annum, a considerable balance remained. The wagon stock had increased to 3976, and the whole of the 6 per cent. debenture stock had been repaid, and except the sum of 900l., held at 5½ per cent., the whole amount of money on debentures was now held at 5 per cent. The success of these wagon companies is in every respect gratifying; and amongst the advantages which may be hoped from such associations is the more economical management of railways. By an extension of the principle on which these companies are founded, it may be possible to divide the enormous amount of duty and responsibility which attaches to the directors of railways, and which almost always proves detrimental to efficiency and economy. A singular accident occurred last week at Silverdale, in North Staffordshire, by which a pit-sinker, named Jabez Browning, lost his life, he having had his head blown off. He and another man were engaged in sinking a shaft, and two other men were also engaged in sinking a similar shaft within eight yards of the first one. They had worked to within eight feet of each other by "cutting," when the men in the second shaft gave notice that they were about to fire a shot. Deceased's companion, a man named Boothby, replied "All right," and the shot, which consisted of three-quarters of a pound of powder, was fired. The result was that it blew out into the shaft where deceased and Boothby were working; the latter was defended by the report, and the former killed on the spot. Boothby said he was not aware that the others were so near, and there appeared to have been no reprehensible carelessness in not ascertaining, before any shot was fired, the direction and extent of the excavations. At the coroner's inquest, one of the jurors wished to find Boothby guilty of the manslaughter of Browning, for not having left the shaft when the shot was fired; but he was at length induced to withdraw his opposition to a verdict of "Accidental Death."

THE COAL AND IRON OF THE UNITED STATES.

The report of Mr. Irvine, Her Majesty's Secretary of Legation at Washington, communicates a large amount of information on the production and manufacture of coal and iron in the United States. It is to coal and iron that the United States of America mainly owe their vast and rapid strides in wealth and civilisation. The railroad paves the way; and multitudes collect from every part of Europe and the Eastern Continent, building great cities, and turning the wild prairies of the West into productive fields of corn. The railroad, again, conveys the produce of their industry to other settled countries, which supply them in return with all those articles of manufacture which their still scanty population does not enable them to produce. As is well known, both coal and iron are found in extraordinary abundance in North America. The minerals lie, in many cases, much nearer the surface than in Europe, and are, therefore, more easily got. In consequence, in many of the less advanced portions of the country iron is worked by small forges, whose owners follow like-wise the trade of blacksmiths, mining the ore one day and forging it the next.

COAL.—Excepting only Great Britain, no country in the world possesses so much coal in proportion to its area as the United States. The area of the coal land in the twelve coal-producing states is estimated at 133,132 square miles, whilst the area of the coal land in Great Britain is 11,859 square miles. Whilst, however, the produce of the coal mines in Great Britain in 1857 was 67,000,000 tons, that of the mines of the United States in the same year—the last in which accurate statistics were obtained—was 10,500,000 tons. The production of coal in the United States is, however, steadily increasing. There are four great coal fields in the United States, and their products may be classed under two general heads—anthracite and bituminous; and these again may be subdivided into semi-anthracite and semi-bituminous coals. The gas or Cannel coal is not frequently found. Pure anthracite coal is found in Pennsylvania, and in the Allegheny, and it contains a greater proportion of carbon—from 90 to 94 per cent.—than any other description of coal; it is the cheapest and best fuel for smelting and melting iron, and other metals. In the City of Philadelphia the inhabitants burn anthracite coal, and a very agreeable contrast is presented by its clear atmosphere—through the comparatively little smoke to which this fuel gives rise—to the murky appearance of many of the large cities of our own country. The semi-anthracite is also found in Pennsylvania; it contains on the average about 84 per cent. of carbon. The most common description is the bituminous, which contains from 82 to 84 per cent. of carbon. The semi-anthracite and the drier semi-bituminous coals are much employed for generating steam. They contain an amount of carbon nearly equal to the pure anthracite, and possess a larger proportion of volatile gaseous matter, which enables the fuel to dispense with so great a current of air as is required by the pure anthracite; this coal is, therefore, generally used for producing steam where speed is desired, particularly for steamship and railway engines. Pennsylvania produced of anthracite coal in 1859 as much as 7,625,000 tons. There was received at Baltimore, in the same year, of bituminous coal 348,821 tons, and of anthracite 268,189 tons. The total coal trade of Pittsburgh and its vicinity exceeds 3,000,000 tons annually. At Chicago in 1859 there was received 131,204 tons of coal. In the same year there was received at Boston 570,325 tons of American, 26,407 of British, and 83,898 of British American coal. Whilst there was imported into Philadelphia, in 1859, British coal to the extent of 1629, and of British American 231, in all 1854 tons, there was exported from the same place 23,446 tons.

IRON.—Mr. Irvine divides the iron manufacture of the United States into three departments—1, the blast-furnaces using anthracite coal, charcoal, raw or coked bituminous coal; 2, bloomeries or mountain forges, which turn ore or cast-iron into blooms or malleable iron; and 3, rolling-mills, converting these into bar, rod, sheet, and nail-plate iron, and into rails. In 1857 the works of these kinds amounted to about 1131—namely, 121 anthracite furnaces, 500 charcoal and coke furnaces, 300 forges, and 210 rolling-mills; and the entire produce of iron was about 783,000 tons, a decrease upon the previous year of 856,235 tons, for in 1856 the total domestic produce of pig, and of rolled and hammered iron, was 856,235 tons. In 1859 there were only eight States of the Union destitute of iron-works—Mississippi, Louisiana, Florida, Texas, Iowa, Minnesota, California, and Oregon. The remaining twenty-five were employing 560 furnaces, 389 forges, 210 rolling-mills; in all, 1159, producing 490,000 tons, an increase, in two years, of 28 works, and of 37,000 tons of iron. In 1856 the Pennsylvania iron-works produced 243,434 tons of anthracite iron; in 1857, 237,318 tons; in 1858, 185,000 tons; and, in 1859, 236,332 tons. To this may be added the production of charcoal iron, amounting to 39,500 tons. The fall in the manufacture of 1859 was caused by the crisis of the previous year, produced by over speculation in the West. The quantity of iron of all kinds, used in every form of manufacture in the United States, was calculated, in 1856, to be 1,330,548 tons; of this quantity 817,358 tons were rolled and hammered iron, 298,275 tons of which were imported, the remaining 519,083 tons being domestic produce. The domestic pig-iron consumed in the same was 337,154 tons, and of foreign 55,403 tons.

In 1859 there was a marked increase in the production of the Pennsylvania rolling mills; large orders were received for rails from the South and West. The railroads in those parts of the Union had originally been mainly constructed of imported rails, of a cheap and inferior quality, which had very soon become unfit for use, and it was discovered to be better policy to pay a higher price for more durable iron. The larger rolling mills for railway iron in the neighbourhood of Philadelphia are the Cambrian Mills at Johnstown, the Phoenix Iron Company at Phoenixville, the Montour Mills at Danville, the Lackawanna Mills at Scranton, the Rough and Ready at Danville, and the Trenton Mills. The production of rails in 1859 was 104,350 tons; in 1858, 65,500 tons; in 1857, 70,000 tons; and in 1856, 76,300 tons. During the latter part of 1854 the mills were wholly or partially closed. The activity of the iron manufacture in Pennsylvania continued during the first part of 1860, but since October in that year it has, of course, like the other industries of the States, experienced a severe check. Many of the mills had stopped work through the Secession movement as early as Christmas last.—*Engineer.*

COPPER MINING IN LAKE SUPERIOR.—As a reply to certain correspondents of the *Mining Journal*, who entertain the opinion that "the palmy days of the Lake Superior Mines are gone;" that the "cute Yankee are not the men to sell a thing they are worth John Bull buying;" that "profits made and dividends do not constitute a present and future value of a mine;" that native copper may hold to a great depth in the Lake mines; though experience and opinion elsewhere are against it, &c. Mr. E. A. Artault, the indefatigable agent of the Ontonagon Mining District Association, has reviewed the correspondence in a lengthy communication to the editor of the *Lake Superior Miner*, and very wisely suggests that all the mining companies of Ontonagon, Houghton, and Marquette, should have their interests represented in the International Exhibition of 1862; that these discouraging correspondents may examine in the large halls of the palace the solid and wealthy blocks of copper smelted by Nature.

"The best answer," he concludes, "we can make to calumny and jealousy, is to show 'our big samples.' Let us go to work and be ready."

THE COAL TRADE OF THE UNITED KINGDOM—No. 1.

Inspector.	District.	Collieries.
MATTHIAS DUNN, Newcastle-on-Tyne.	Durham and Northumberland	142
JOHN J. ATKINSON, Bowburn, Durham.	Cumberland	28—170
CHARLES MORTON, Wakefield.	Durham, South Division	141
JOHN HEDLEY, Derby.	Yorkshire	387
THOMAS WYNNE, Store.	Derbyshire	153
JAMES P. BAKER, Wolverhampton.	Nottinghamshire	21
JOSEPH DICKINSON, Pendleton.	Leicestershire	14
PETER HIGSON, Manchester.	Warwickshire	17—205
LIONEL BROUGH, Clifton, Bristol.	Staffordshire, North	127
THOMAS EVANS, Richmond Villas, Swansea.	Cheshire	35
WM. ALEXANDER, Glasgow.	Shropshire	68—230
ROBERT WILLIAMS, Edinburgh.	Staffordshire, South	441
	Lancashire, North and East, or the Manchester District	266
	Lancashire, St. Helen's	23
	Wigan	82—105
	Flintshire	40
	Denbighshire	39
	Anglesea	5—84
	Gloucestershire	63
	Somersetshire	37
	Devonshire	2
	Monmouthshire	79
	East of Glamorganshire	7—188
	Pembrokeshire	20
	Carmarthenshire	86
	Glamorganshire	186—292
	Lanarkshire, West Division	63
	Ayrshire	91
	Stirlingshire, West Division	19
	Dumfriesshire	12
	Renfrewshire	9
	Argyleshire	1
	Dumfriesshire	4—199
	Lanarkshire, East Division	108
	Fife	44
	Clackmannanshire	9
	Haddingtonshire	12
	Edinburghshire	16
	Linlithgowshire	17
	Stirlingshire, East Division	20
	Peebleshire	1
	Perthshire	1—228
	Ulster Coal Field	13
	Leinster Coal Field	31
	Munster Coal Field	29—73
TOTAL NUMBER OF COLLIERIES IN UNITED KINGDOM.		
ENGLAND AND WALES		2509
SCOTLAND		427
IRELAND		73 = 3009

COAL MINE INSPECTION.

THE YORKSHIRE DISTRICT.—Mr. Morton is glad to be able to report favourably and hopefully concerning the general operation of the Mines Inspection Act throughout his district. The mortality arising from destructive gas is not lessened as compared with the preceding year, and he has again to remark that it is mainly attributable to naked lights being used instead of locked safety-lamps. The deaths occurring in shafts appear to be gradually abating. The catalogue of lives lost by falls of roof and coal is slowly diminishing, but he is of opinion that it is capable of further reduction. His earnest attention has been given to the significant fact that fatal accidents are now more prevalent than they formerly were on underground tramways, owing chiefly to the more general introduction of self-acting and engine planes; but he trusts that the recent legislative enactments in reference to these planes will tend to make such casualties less frequent. An erroneous impression prevails amongst ill-informed or prejudiced persons that where safety-lamps are much relied on ventilation and discipline will, as a necessary consequence, become matters of secondary importance. Extended and enlightened experience, however, will assuredly lead to an opposite conclusion, and will show that a competent and cautious colliery viewer wisely introduces the safety-lamp, not as a substitute for thorough ventilation and strict discipline, but as an essential adjunct and auxiliary to them. It is almost universally acknowledged by colliery people of every grade that the establishment of special rules, under the late Inspection Act, has been productive of very beneficial results, and with an anxious desire to spread still further the salutary influence of good discipline, and thereby to diminish the grievous amount of human suffering in coal and ironstone mines, it has been readily decided by the chief proprietors of such mines in the West Riding to revise and improve the old special rules, so that they may completely agree with the new Act of Parliament. He believes the amended special rules will ere long be extensively adopted.

Mr. Morton states that whilst taking the whole of the mines of Great Britain the loss of life averaged, in 1859, one death for every 79,400 tons of mineral produced, the deaths in his district, in 1860, were only one for every 170,000 tons of mineral raised.

THE SOUTH DURHAM DISTRICT.—Mr. Atkinson reports that the deaths from explosions during 1860 have been unusually numerous; this result is not, however, due to ordinary explosions of fire-damp generated in the workings of the mines, but arises from an extraordinary and almost unprecedented case of explosion at Hetton Colliery, supposed to have been caused by the gases distilled from the coals applied to the fire of an underground engine; such gases, it is believed, having lodged and accumulated in the flue leading from the boiler towards the upcast shaft, and ultimately been exploded by the boiler fire from which they emanated. The deaths from falls of coal and stone have remained about stationary, a sad miscellany of accidents show a satisfactory diminution.

THE SOUTH WALES DISTRICT.—In this district the loss of life appears to be gradually diminishing, though loss of life from falls of coal and stone is still on the increase, the accidents from this cause having for the most part taken place in the mines of Aberdare and Merthyr. Mr. Evans considers that there can be no doubt the thick veins of this district are dangerous to work, from the singular stratification and the great number of slips and riders, which cannot always be seen. The quantity of coal worked from these mines has considerably increased. He thinks more frequent supervision, and better timbering, would save many lives. The system of working the bottom coal first, and having the top coal for a roof, is attended with more danger than getting the top coal first, having its natural roof, and raising the bottom coal when sufficiently far in. The objection urged by many of the viewers to this plan is that of expense; probably it might be more expensive, but if lives can be saved it ought to have a fair trial. Shaft accidents show a decrease, but not to the extent they have a right to hope for; they are in many cases preventable. Tops on the carriages should be strong, and made to resist a stone falling on them.

As regards the education of the miners, Mr. Evans thinks that every colliery should have a school; that the men themselves should pay some little towards it, and every encouragement be given to night schools. In his district, in consequence of its rapid growth and the enormous increase of the coal trade, it is difficult to obtain the services of men with good practical knowledge, to fill the positions of overmen or firemen, who can read and write; much can be done at the schools referred to. There is no prospect of the establishment of a mining school in Wales, there are so many difficulties, both pecuniary and otherwise. The Bristol school, in the adjoining district, is badly attended, and does not afford encouragement, neither does it get the support of the coal trade generally. The Institute of Engineers of South Wales is still progressing; the members are chiefly the intelligent viewers of South Wales and Monmouthshire, and some of the

agents of the large enterprising commercial establishments. The iron and coalowners themselves, who must reap any benefit there may be attained by such an association, do not fully recognise it.

MINING SHARE DEALING—THE PELYN WOOD MINE.

Although few classes of speculative investment are more remunerative to capitalists than mining, there is probably no occupation connected with our national industries that suffers so much from the continued and unjustifiable attempts of individuals, who have been overtaken by misfortune in their ordinary business, to prove that mining has been their ruin, and that they were induced to invest in it through false and fraudulent misrepresentations—some of them on the part of those through whom they have dealt, sometimes on that of the parties who have prepared a given prospectus. The simple fact that the profits realised upon mining frequently reach ten, twenty, or even fifty per cent. per annum upon the amount embarked, is sufficient to lead the practical man of business to conclude that the risk will be greater than upon transactions which promise only to return three or five per cent., and, as in all commercial dealings, the calculations as to the desirability or otherwise of the investment are made accordingly. But there is a class of individuals who assume that error in judgment upon their part is impossible, and that nothing can prevent them becoming suddenly rich from the rapid return of the fabulous profits, with which miners are so familiar, upon the money they have staked. These thoughtless speculators place themselves, in fact, very much in the position of a man who, commencing the business of an Australian merchant without credit and with a capital of only 10,000*l.*, exports 10,000*l.* worth of merchandise in a single bottom. His chances of failure are evidently two-fold at least—the proceeds may be lost altogether, and his ruin effected at a single stroke. His error is that he has speculated beyond his means, and the consequence is, that, unless every event should happen precisely as he has hoped, he is a ruined man.

A case of importance to the mining interest, as affording an evidence of the mode in which it is endeavoured to shake the confidence of the public in the stability of mining enterprise—that of *Bradley v. Fuller*—was tried at the Croydon Assizes on Saturday, the 17th inst. The effect of the verdict was to prove that no deception whatever had been practised upon the plaintiff, and that loss had accrued to him only through his own negligence, not having been raised. It appears that in Dec., 1859, and the following month, Mr. Bradley purchased certain shares in the Pelyn Wood Mine, which was represented by the promoters to be a mine of very great promise, or, as Cornishmen usually express it, "one of the richest mines in Cornwall." Mr. Bradley having read a very genuine report, from the captain, in the *Mining Journal*, alleged that he went to Mr. Fuller's office to ascertain whether the details given could be relied upon, and that from the information obtained from him he was induced to purchase shares upon which a loss had accrued; he (Mr. Bradley), therefore, sought to recover 324*l.*, being the sum paid for the shares purchased, and the amount of calls paid upon them. The first trial was in which Mr. Bradley had in Pelyn Wood shares with Mr. Torkington, a gentleman, and he had long known, and who sold him 20 shares for 56*l.* 10*s.* The market price improved, and a few days afterwards he bought 40 shares of Mr. Fuller for 130*l.*; then 20 shares of Mr. Broadwater for 62*l.* 10*s.*; and lastly 20 shares of Mr. Powell for 61*l.* 5*s.* Upon these shares he paid one 5*s.* call, which amounted to 23*l.* 15*s.*, and raised his supposed claim against Fuller to 324*l.* In January of the present year the shares were forfeited for non-payment of call, and Mr. Bradley now sought to reimburse himself by alleging false and fraudulent representations against the purser of the mine.

The knowledge and memory of Mr. Bradley seem to have been unfortunately elastic, and when under cross-examination by Mr. Lush, Q.C., he admitted quite as much to prejudice his own case as any of his witnesses (the want of evidence of fraud was so apparent) that at the close of the plaintiff's case Mr. J. Berry, the solicitor for the defendant, decided upon not calling witnesses for the defence. Mr. Bradley admitted that he had known Mr. Torkington, of whom he purchased the first lot of shares, for some years, but did not know his profession; he jobbed about the market, and was usually called a "stag." Mr. Torkington had spoken to him three months previously about the Pelyn Wood Mine, and told him that a good thing was coming out; but it was the representations of Fuller that induced him to become a shareholder. He (Mr. Bradley) had never read the *Mining Journal*—that was to say, he never subscribed to it; he only read it at the Jamaica Coffee-house, where he went every morning to read the newspapers. He had attended the company's meetings, and signed the cost-book, because they would not let him vote without it. He discovered in Jan., 1860, that he was being swindled, but continually attended the meetings to see what extent. The highest price he paid for shares was 3*l.* 2*s.* 6*d.*, and he had not seen them quoted above 3*l.* 4*s.* He believed Mr. Lane offered him 3*l.* 20*s.* shares, but did not know whether he was in earnest. He would not sell, because he thought it a good investment. He voted against the resolution to purchase the South Pelyn Wood stock, because in his opinion it belonged to them already. He would not pay any more calls, so let his shares be forfeited, and then brought the action. The prospectus was then read, Mr. Justice Blackburn remarking that it would save time, as, so far as he could learn, the defendant had only repeated verbally what he previously had printed and published in the prospectus. Upon the examination-in-chief being resumed, Mr. Bradley stated how he had become acquainted with the various parties of whom he purchased the shares, and remarked that Mr. Fuller's statements were so much more flowery than anything he had read in the *Mining Journal* that he was so overcome that he bought the shares. The evidence of the captain of the mine was deemed so important by both parties that Capt. Seymour was subpoenaed both by the plaintiff and the defendant. The plaintiff wished to prove that at the time he purchased the shares the mine was largely in debt, instead of being, as represented, 201*l.* 12*s.* 10*d.* in hand; but Capt. Seymour's evidence was to the effect that his reports were true to the best of his knowledge, that he had based them upon the assays obtained from Jenkin, of Callington, whom he had himself employed, and of Redruth, and another London assayer, whose name he did not recollect, and he suggested that the samples might have been changed after they were taken from the mine. He believed that the mine was a good one if properly worked, and that 2000*l.* or 3000*l.* would place it in a paying state. In cross-examination, Capt. Seymour stated that his assertions as to the value of the mine were sincere when he made them, and he maintained the same opinion still. Fowey Consols, several of the lodes in which ran through the Pelyn Wood sett, had returned 1,200,000*l.* profit to the adventurers. He had himself claimed half of the South Pelyn Wood sett, and received 10*l.* for his half, but would not swear that he had not valued that sett at 5000*l.* He had read the statement in the prospectus that pitches were working at 3*l.* and 4*s.* in 1*l.*; that was correct, but the average was 2*s.* in 1*l.* He recollected that, in Dec., 1859, there was a pitch working at 2*s.* in 1*l.*, and several were working at 3*s.* and 4*s.* in 1*l.* for copper, and 10*s.* in 1*l.* for silver. Mr. G. I. Soper, the purser, who held office previous to Mr. Fuller, and Mr. Edwin Jones, one of the directors, were also examined, but nothing of importance was elicited from their evidence.

The counsel for the plaintiff—Mr. Laxton—having detailed the hardship which was experienced by Mr. Bradley through the non-success of the mine, Mr. Prentice, the junior counsel for the defendant, urged that Mr. Bradley was not the novice in mining affairs he pretended to be, that he was a man of the world and of long business experience, and that he was not to be easily duped. The lower judge, however, was of opinion that the plaintiff, and certainly had suffered as much from over-sanguine expectations having been held out. They had heard Capt. Seymour declare that he still believed the mine to be a desirable investment, and nothing that was imputed to the defendant was more sanguine than what had previously been stated in the *Mining Journal*. Indeed, Mr. Fuller would have been justified in stating more than he did. He did not see how upon the facts of the case, upon the evidence of the plaintiff, or on that of his witnesses, they could find the defendant guilty of the deliberate fraud with which he had been charged, nor even of representing to the plaintiff that which he did not himself believe to be true. The charge of fraud they would, he thought, agree with him in considering as an afterthought.

Mr. Justice Blackburn then explained to the jury the various representations on which the plaintiff relied, and said that in order to establish his case the plaintiff must show, not merely that there had been mistake and negligence, but that the statements and representations made by Mr. Fuller in the prospectus produced were fraudulent and untrue to defendant's knowledge. If he knowingly made false representations to the plaintiff, and thereby induced him, on the faith that they were substantially true, to purchase the shares, they would find their verdict for the plaintiff. In other words, if it was made out to their satisfaction that the statements and reports which were from time to time sent up by Capt. Seymour to Mr. Fuller were wrong and inaccurate, and that Mr. Fuller endorsed them, and the plaintiff was induced to purchase the shares, and that the defendant had sustained by the purchase and loss of his shares. Capt. Seymour had been called before by the plaintiff, and Mr. Laxton had said the plaintiff was obliged to call Capt. Seymour, but that he was more the defendant's witness than plaintiff's. Now he (the learned judge) agreed with what had been said by Mr. Prentice on that subject—namely, that Capt. Seymour was their witness and not his; for it certainly appeared to him (Mr. Justice Blackburn) that Capt. Seymour was rather hostile to the other side than the defendant, and that he was ready and willing to say all the evil he knew of him. However, he was called, and did not prove anything calculated to show that Mr. Fuller was guilty of fraud, and he said that he had said the Pelyn Wood Mine was a good one, and that the assayers had certified as being the percentage of the various ores submitted to them—copper, nickel, cobalt, and silver—might certainly have carried conviction to the mind of Mr. Fuller as well as any other person; and it was hardly necessary to say that they (the jury) ought not to find a man guilty of false statements, unless they were clearly brought home to him. It was for them to say whether the plaintiff's case was made out. He should say himself that what they would look to would be any particular line or words contained in the prospectus, but to the general impression that the Pelyn Wood Mine was believed to be an exceedingly rich mine. That would be the real substantial inducement to buy the shares. If they thought that the defendant did not make the statements to the plaintiff falsely, and knowing them to be false, they would find for the defendant.

The jury, after a minute's deliberation, found a verdict for the defendant. The trial commenced at nine in the morning and concluded at five in the afternoon. Throughout the day the Court was crowded to excess by persons connected with mines and mining speculations, and much interest was excited, it being pretty well understood that if the plaintiff succeeded in obtaining a verdict, a number of similar actions against the same defendant would follow upon that result.

SWANPOOL MINE.—The Vice-Warden of the Stannaries has directed a dividend of 6*s.* 8*d.* in 1*l.* to be paid forthwith. The company's debts were 2500*l.*, and the official liquidator has realised 1402*l.* 19*s.* 6*d.* The expense of winding-up has been 300*l.*, leaving a balance of 867*l.* 19*s.* 6*d.*, out of which the above dividend will be paid.

ACCIDENT AT A COLLIERY TRAMWAY.—At the South Lancashire Asizes, Sarah Whitaker, as administratrix of S. Whitaker, sued Messrs. Lees, colliery owners, Oldham, for loss sustained in the death of her husband, through the alleged negligence of the defendants. After a protracted investigation, the judge asked whether the plaintiff would elect a verdict for the defendants, or a nonsuit. Sergeant Wheeler suggested a verdict for the defendants, in order that he might have an opportunity of moving the Court above. The judge, however, ordered a nonsuit, remarking that he did not believe there was any obligation on the defendants, and that he would not place the plaintiff in a position to spend her money in litigation. A nonsuit was then entered.

MINE ACCIDENTS.—At the River Tamar Mine, B. Mitchell fell down the shaft and was killed. The captain of the mine, J. Cook, ascended with the deceased, but the latter had for some purpose to go down again, and in doing so he slipped from the ladder, and met his sad fate. As a miner at Tincroft Mine was engaged in tampering, the hole exploded, carrying away part of his hand, and it is feared he will lose his right hand. Another miner was also injured.

WELSH SLATE TRADE.—A fact of considerable interest in connection with London companies engaged in working Welsh slate quarries was recorded by a dinner given at the Commercial Hotel, Portmahon. In 1841, Mr. W. B. Chorley, an Englishman, commenced the Cwmorthin Slate Quarry, at Penistone, and continued it with varying success until 1855, when Mr. Chorley became bankrupt, and the quarry property was thrown into Chancery. About two years since the Court of Chancery decreed the quarry property, not to the mortgagees, but to Messrs. Chorley and Melville, two of the co-partners, and it is now being again worked with success. Mr. Chorley received a

second-class certificate from the Commissioners of Bankruptcy, and was consequently freed from all liability; but he resolved to dispose of his interest in the quarry, and pay the whole of the creditors under the bankruptcy 20*s.* In the pound, which was done at the dinner mentioned.

TRUTH'S ECHOES; OR SAYINGS AND DOINGS IN MINING.

Notwithstanding the slight fluctuations which have taken place during the past week, there is evidently a more favourable tone given to the Mining Share Market generally than witnessed for some months past. The enquiries recently made have resulted in *bona fide* transactions in numerous instances, and a goodly number of shares, especially in progressive mines, have changed hands. The unprecedented low figures to which many mines receded, and the improvement in the standard for copper ore, with other contingencies, have, no doubt, been the incentive to purchasers; and at no time could investments be made more favourably than at the present.

WHEAL SETON shares have been in good request, and changed hands at higher rates, but a change has followed. **EAST BASSET** shares continue heavy, and are offered at lower prices. **COOK'S KITCHEN** shares have been in demand at improved prices, in consequence of an improvement in the mine. **STRAT PARK** shares have rallied a little, and are more in demand. **PROVIDENCE** shares have changed hands at present quotations. **EAST CARADON** shares have been in good request at improved rates, and a great many changed hands. Yesterday a further advance took place, and shares are firm at much higher quotations. **MARKE VALLEY** and **WEST ROSE DOWNS** shares have been sought for at advanced prices, and continue in favour; the latter have considerably improved in price, and are likely to go higher, from the scarcity of shares. **WEST CARADON** shares are offered at lower rates, and buyers shy with present prospects, although the sale yesterday was very good. **LUDBOOTH** shares have been very much in demand at better prices, in consequence of an improvement. **HERODSFOOT** shares have rallied from recent low figures, and are still sought for at improved rates. **CARN CAMBORSE** shares have been in good demand, and several transactions followed, arising from a reported improvement in the south lode. **GREAT RETALLACK** and **EAST GRENVILLE** shares have been freely dealt in, and prices tend upward. **UNITED AND CALVADEACK** shares have been enquired after and transacted. **NORTH DOWNS** shares were in good demand and largely dealt in last week; and notwithstanding the declaration of the dividend of 2*s.* 6*d.* the shares have receded. It is to be regretted that dividends should be made in anticipation of ore bills not at maturity, as it clearly shows the object in view. **NEW TRELEIGH** shares have been done much lower, and from the number offered they are likely to decline more. **GREAT TREVEDEORE** shares were in good demand last week, but few have been transacted this week, and the prices are quoted lower. **GREAT WHEAL MARTHA** shares have been in good request during the past two days, and are much firmer, with a likelihood of a great rise. **LARRY BREKKA** shares are in demand at present prices. **SOUTHWICK CONSOLS** shares have been done at lower rates.

At **GREAT WHEAL MARTHA** the excellent prospects are unabated, whilst the engine-shaft is going down rapidly in very favourable ground for sinking. They have met with a small branch in their progress, which, from its character, is highly favourable, and further encourages the hope that a large and productive lode will be cut in the 50 fathoms level. The crusher commenced working on Tuesday last, and they calculate now on having full 500 tons ready for the next sampling. There is no change in the productive places, and the tribute department is looking equally well.

At **KELLY BRAY** an improvement has taken place in the mine sinking under the 60, estimated worth 20*l.* per fathom; and from present appearances there is reason to expect further improvements in the eastern part of the mine.

At **EAST GUNNIA LAKE** they have a very promising lode in the 36 cast, which is unusually large, and producing fully 4 tons per fm.; and there are two winzes which are looking very well at present, but the stopes have very much failed. There are some favourable points which are expected to come off shortly, which may give more encouragement should the result be as anticipated. **HAWMOOR** is represented as improved in the 25 east, where they have a lode 3 ft. wide, half of which will yield 3 tons per fm. of good ore. The other places are without any change. **EAST DEVON CONSOLS** it is reported that they have a change of ground in the 40, which it is hoped will result in sinking full 12 fms. below the 40. The shaft continues sinking in favourable ground, which is now down 12 fms. below the 40.

GREAT TREVEDEORE CONSOLS is represented to be looking remarkably encouraging. The lode in the 80 west is very large, and increasing in size and character, and from present appearances there is no doubt of a course of ore being not far ahead; the lode being from 5 to 5 ft. wide, the ore part being nearly 2 ft. wide. They are now hauling some good work to the surface.

EAST CARADON has again improved, and from the present appearance of the caunter at the 60 there is every reason to calculate on its becoming as valuable as at the highest estimation. The eastern end in the 60 has improved this week from 60*l.* to 80*l.* per fathom, and the western end from 40*l.* to 50*l.* per fathom. They have also resumed driving the 50 east and the caunter, which was worth 15*l.*, and is now valued at 20*l.* per fathom. The other productive places are without any change. The monthly sale of copper ore at the ticketing yesterday amounted to 2339*l.* **MARKE VALLEY** continues to look remarkably well, all the ore-producing places fully as valuable as recently reported on, with large reserves accumulating. The sale of Thursday realised 182*l.* for the month.

At **SOUTH CARADON WHEAL HOOPER** the lode in the 62 west is reported to have improved both in value and character, looking more favourable in the bottom of the level, affording strong reasons for believing that an important change will shortly take place here. At **NORTH JAW** they have a splendid discovery in the 12 fathom level; in driving the end east of the caunter shaft they have (it is reported) a course of ore worth full 100*l.* per fathom for tin, and still holding good. The discovery has created considerable sensation in the locality. **WEST POLMAR** (formerly Carvath) the operations are going on satisfactorily, the object being to open the Wheal Polmar lodes, which have proved so productive in that mine, so far as developed. Although opinions among practical men vary, a few weeks will disclose the value and importance of the first lode towards which the cross-cut is being extended, and afford more decided views as to the prospects of the adventure.

At **EAST LARN BREA**, in the several places of operation from whence they are returning their ore, the lodes maintain their size with great regularity, and each productive place yields about 2 tons per fm.; and the prospects generally are considered very encouraging. **EAST ROSEWANE** they have intersected the lode in the 55 cross-cut, which is reported to be very encouraging at present, worth from 12*l.* to 14*l.* per fm. There are some slight improvements in other places, which will make up for the falling off in the back of the 43. Upon the whole, the mine generally is looking tolerably well.

At **EAST GRENVILLE** the lode in the shaft maintains its size and value. The 25 east and 35 west are represented as looking more promising. There is no other change to notice. **GREAT RETALLACK** the sinking of the shaft encourages the hope that lead will be found to predominate as the lode becomes more strongly inclined; with that mineral, but at what depth will become of any commercial value it is quite uncertain. The quantity of blende laid open is extraordinary, but little or no advantage can be taken, in consequence of the present low price of ore. **SOUTH CONDERROW** the lode in the 40 west is represented to have improved, the end being more encouraging, carrying some rich copper ore, with other promising indications. **CARN CAMBORSE** is reported to have very considerably improved in the adit on the south side, which is stated to be worth upwards of 15*l.* per fathom. The geological position of the mine, surrounded as it is by well-known and productive mines, speaks highly in its favour.

At **TOLCARN** the prospects are assuming a very encouraging and satisfactory appearance, from the general improvements which have recently taken place. The lode in the engine-shaft is represented to be of a most promising character, and is now down below the 30 fms. level, where it is worth full 40*l.* per fathom. The 20 fms. level, both east and west, is looking very favourable for improvement. The adit level, on Enthoven's lode, is productive in two points for tin, one valued at 20*l.* per fathom, and the other at 12*l.* **WHEAL PROSPER** (Bragge) is stated to be still improving; the engine-shaft, sinking on the course of the lode, is down between 8 and 9 fathoms under the 20. In the adit and 10 fms. level the lode is very strong in mundie, mixed with tin. The mundie is leaving the tin below the 20, and becoming more valuable every foot in sinking. From the appearance presented there is every reason to believe this will become a permanent and leading mine when the next level has been opened.

At **TOLVADEEN** the improvements recently taken place a short time since are stated to continue, and are looking remarkably well, there being a fine course of ore in the 67, and, from present prospects, there is every reason to calculate on a valuable and permanent course of ore; and the ground which is now being developed bids fair to prove its continuance.

PEDN-AN-DREA is represented to be looking, upon the whole, more promising. They have a very good lode for tin in the bottom of the 100, although the end is poor. There is also a good lode in the rise in the 90, and looking well for a further improvement. There are other places which are holding out much promise, and the returns likely to be secured on their reaching the tin ground which is known to have gone down from the 40 fms. level.

NORTH HAFOD: Among the many new adventures recently brought before the public, probably none exceed the Hafod estate, in Cardigan. The highly-mineralised ground, geological position, and adaptation for developing the numerous and well-defined lodes with rapidity and economy, perhaps are nowhere to be found so favourable as here; and under the supervision of intelligent and practical men, whose experience in the Principality are combinations which are likely to be highly profitable to those interested. As far as the operations are carried, they have hitherto been attended with promising results. Several excellent and valuable looking lodes have been opened, and arrangements are being made for carrying on the adventure with judgment, economy, and profit. The many inducements for opening this property, with the prospect of success attending the development of the same lodes in the immediate neighbourhood, influence all interested in mining to watch its progress with hope and anxiety.

From **Mr. E. COOKE**—After a long period of dullness, the market has begun to assume a more cheerful aspect, although as yet there is not much change in prices generally. If we may be allowed to judge from the several years' experience we have had of the market, a much better state of things will soon be witnessed in mining matters. Several circumstances confirm us in this opinion, among which are the decline in the value of money and the advance in the price of copper. These favourable changes are very likely to be further accelerated speedily, on account of the abundance of money and the prospects of a fine harvest. The public are beginning to invest in good progressive mines, which appear just now to be more in favour than the heavy dividend mines; and we believe that the market will make judicious selection, and purchase into them immediately, will soon witness a considerable rise in their market value. There is not any large quantity of good stock on the market, consequently a little increase in the demand must tend to considerably enhance prices.

On Saturday, the 17th inst., we had the pleasure of witnessing the new discoveries in the 60 and 67 fms. levels at **TOLVADEEN**, and without pretending to any practical knowledge of mining matters, we will state a few particulars relative to the same. In the extreme end in the 67, the ore part of the lode was producing from 3 to 4 tons of grey ore, worth from 50*l.* to 60*l.* per fm. A level has been driven on the north side of the lode, about 10 fms. 2 feet to the west of the cross-cut. A bore-hole has been put in to test the quality of the lode at this point, and it produces ore of the same rich description. In the 60 a winze is being sunk at a distance of 12 fms. 4 feet from the cross-cut in the 67, and is producing already—although only about 8 feet deep—about 1½ ton of grey ore. We state these few particulars for the information of those who still have faith in the merits of Tolvaheen, and we vouch for the correctness of the information thus rendered. That the mine possesses great merits none but the most prejudiced mind can deny, and that those merits will yet be fully appreciated we entertain but very little doubt. The prospects of the lode in the Well Down part alone—lately added to Tolvaheen—warrant us in saying that there is scarcely any mine that offers better chances to those disposed to invest in mining property. It would be invidious to particularise all the mines that should be invested in, but we cannot help referring to **EAST WHEAL DAMSEL**, which adjoins the Great Consolidated Mines, in the parish of Gwennap. A cross-cut is being driven to cut one of the lodes of these celebrated mines. This is one of the best speculations in Cornwall; and if the lode be found as rich as anticipated, a very great prize will be opened up. A great advantage in the working of this mine is that it is perfectly dry to a great depth, being unwatered by Consols and the United Mines. **STRAY PARKS**, **WEST CARADONS**, and **EAST CARADONS** have advanced considerably, and we anticipate a further rise in these and several other mines during the next week.

P.S.—Referring to Mr. Lane's notice of **WHEAL MOTTE**, in last week's Journal, we beg to state that Capt. Pope has not inspected this mine during the last three months; Capt. Tonkin, of Dolcoath, and Captain Daw, of Carn Brea, inspected it about the same time.

their reports may be seen on application. The public can then judge for themselves of the *bona fide* of this property.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

TAVISTOCK MINING DISTRICT.—"A Sufferer" complains grievously of having been sued for 120*l.* beyond the amount due from him for calls. It is to be hoped, for the good of mining, that secretaries and pursers will at all times endeavour to hand over to merchants the names of defaulters whose arrears are about equal to the merchants' claims; but as the success of many mines is often prevented from funds not being forthcoming to pay current expenses, "A Sufferer's" grievance would be better remedied by the prompt payment of all calls as soon as made.

MINING IN SHROPSHIRE.—Since our previous mention of the formation of a company for working the Central Snailbeach Mines, the opinions of Captains John Evans and David Davies have been taken as to the probability of the rich lodes of the Snailbeach proving equally productive in Central Snailbeach, and the result must be highly gratifying to the shareholders. From their practical knowledge of the working of the Snailbeach Mine—the former having been forty years employed in the Snailbeach Mine, and now one of its resident captains, and the latter more than twenty years connected with the mine, and now resident engineer—every reliance can be placed upon their judgment; and, as they state that they are convinced that the strong vein delineated in the south-eastern boundary of the plan of the Snailbeach sett is none other than the champion or main lode of the Central Snailbeach sett, no doubt can be entertained as to its desirability as an investment.

MINING IN THE MOLD DISTRICT.—Very satisfactory progress has been made in laying open the Stamp Office Mine: it is now open to the depth of 56 yards, and commenced. Drilling the 56 and level west on the course of the north lode is the most important point; at present the lode is well-defined one; it now produces good ore, and works admirably well. A little time and perseverance only are required to open up a valuable mine.

EAST CARADON is one of the richest mines in Cornwall, and is laying open most extraordinary reserves of copper ore. In the 60 the caunter lode has been driven on nearly 50 fms., the actual produce of which has been 86*l.* per fm. for the whole drive; and, it should be remembered, not a pick has been put in the back of the 60 as yet. The sampling of 280 to 290 tons for sale this week has been raised from the 50 east and the 50 stopes, together with ores broken in driving the 60. Secombe's shaft is sinking on a splendid lode, with every indication of a course of ore being near their present operations, so that an early discovery may be expected. The next sampling will probably be 300 tons; and as the Caradon Railway is now brought up to East Caradon dressing-floors, the cost of carriage will in future be reduced.

WHEAL GREYS.—Your valued *Truro* Correspondent called attention to this mine last week, and stated that it "has been a great success." Steam stamps are at once to be erected, and the future of this concern will show the shareholders and the public a mine of no small magnitude, and that of a great and profitable concern. Very little has ever been said or written about this concern, the best proof being the monthly returns of tin and profits.

PAR CONSOLS.—The improvement continues in the copper district of this mine, which may lead to very important results.

NEW CROW HILL.—The ground at the shaft continues good for sinking. The lode in the 35 is not yet cut through, but is rather improving than otherwise in driving. No alteration in the 15. Two more men are put on in the 55 east, and, from the nature of the ground, the progress is likely to be rapid. The lead ore has been sold at 15*l.* 6*s.* per ton.

SOUTH CARADON WHEAL HOOPER has within this last week considerably improved; the lode in the 62 west is again productive, producing rich yellow ore, and the ground considerably easier—the last price was 16*l.* per fm., the present price is less than one-third of that amount; similar changes frequently occur in South and West Caradon. There is now every appearance of a continuous course of ore. The shaft is nearly completed to the 90. The boundary lode is not yet intersected in the 47 cross-cut; the water is still coming from the end.

GREAT WHEAL VOL.—An important improvement has taken place in the 142 west, at Wheal Metal, the lode promising to prove extremely rich. This has raised the estimate about the mine, as they have long been looking for such an improvement in the west. They have commenced to drive the 152 fathom level, where there was every prospect of meeting with a course of ore. Throughout the mine a general improvement has taken place.

EAGLEBROOK.—A great improvement has taken place in this mine. In the winze from the 10, in advance of the 20, the lode is from 4 to 5 wide, 3 to 4 feet in height; it is a good course of lead ore. This is a very important improvement; and if it holds, will soon bring the mine into a dividend state.

CUDDEA.—Two fathoms more of the lode have been taken down in the 60 fms. level, which brings 2½ feet wide, yields 15 cwt. of tin per 100 sacks. About 6 fms. of the lode of this value has been opened out, with every prospect of continuance. It is considered this will make a permanent and productive tin mine. The dressing apparatus is now in operation, and the fire was lighted in the calcining-house on Thursday. From this time returns of tin ore will be made.

CARMARTHEN UNITED.—By reference to the report from this mine in another column, it will be seen that Mr. Evan Hopkins predicted three weeks ago has been verified almost to the letter. While this must be exceedingly gratifying to Mr. Hopkins, and reflects the highest credit on his professional skill, it may serve to show that mining, when conducted on scientific principles, is not such a lottery as many would have us believe.

NORTH HAFOD (OR DEVIL'S BRIDGE).—The report upon these mines this week is of the most favourable character, indicating that the proprietors are upon the brink of good fortune. An old mine has been found, containing three lodes; the adit upon the middle one had been cleared and timbered for a distance of 30 yards; this lode is one of considerable size, and the surface indications are of the richest and best description; the centre or middle part of the vein contains carbonate of lime and spar, intermixed with lead ore and gossan for a width of 4 feet, so that there can be no uncertainty about there being a rich mass of ore below. It is impossible to know when this old mine was worked, as the whole of the surface was overgrown with grass, and the presence of the mine was only detected by the irregular or hillock-shaped form of the surface; possibly this work was done in the time of the Romans, possibly in the middle ages. The mine was found, which often happens, when the surface is determined as to the antiquity or otherwise of the work, but it is a well-known fact that the Romans had been very busy in these parts, as their remains, in the shape of coins and peculiarity of the work in rock-hewing, are seen in considerable abundance in various parts of the country. The report goes on to state—"I have gone very carefully over all the ground, beginning from the Frongoch Mine workings to the extent of our boundary. Every inch of the lode is easy to be traced, and in two places we have succeeded in finding it, where it is discovered from 15 to 20 ft. in width, composed of gossan, spar, and stones of lead ore." We were aware that the course of this rich vein lay through the ground, the evidence of the old miners, the remains of old lead furnaces, the tradition of the country, and the evidence of the Ordnance Survey, as well as of our own senses, by looking over the line of the workings to the west and east of the grant, sufficiently established the fact, but it is another and better thing to find the lode existing in the ground, crystallised in great strength, containing all the blossoming, so to speak, of the metals mixed with ore, at the surface, and the report further says—"In the place where we are now sinking, the lode has a splendid appearance, and we intend sinking in it as deep as the water will permit; a few fathoms would be certain to reach a good body of lead ore. This is the very best news we could expect, and with a vein of such magnitude we may anticipate results so good and great as are only realised in the great mines of the kingdom." After speaking of other places of promise along the ridge of the lode, the report illustrates the character and nature of the *Rhur Gotta* lode, saying—"I have very carefully studied the position of the *Rhur Gotta* lode, which is from 30 to 40 ft. wide, and one of the master lodes of the country; it is, in fact, according to my opinion, the strongest lode I have ever yet met with." A mass of crystalline matter, accumulated by a slow process, for a width of 40 feet, in the quiet, soft, and silky slates, does certainly testify to the wondrous work and time occupied in building up these gigantic lead formations, and the whole may be very aptly described as a powerful lode. Nearly the whole of the matter contained in this great width of 40 ft. is foreign to the rock in which it is embedded, the rock of the country being formed of two sorts of elementary matter—silica and alumina; while the lode is composed of lead ore, iron, blende, carbonate of lime, and silicious matter, the latter being the most important part, and is homogeneous with one of the elements of the slate.

GREAT CRINNIS.—The lode in the 100 west is still looking well, 7 feet of which has been carried ore throughout; the whole of it is producing saving work. On the north part there is a leader 1 ft. wide, which is increasing in size, and produces good ore. The agents, and others who have seen it, are strongly persuaded that the end is on the verge of a course of ore.

BULLER AND BASSET.—The lode in the 80 east is 2½ ft. wide, and of a very kindly character. The lode in the 80 west is 3 ft. wide, composed of soft quartz, peach, mundie, and spotted with yellow copper ore. An important change has taken place in the granite, which is now of the same character as in the adjoining productive mines.

THE GOLD MINES OF NOVA SCOTIA.—(From a Correspondent.)—The great importance of the recent discovery of gold near Halifax has just received fresh confirmation from communications received by the last post from thence, and of which particulars will be found in another column of the Journal of to-day. It seems that the facts thus announced have been for some time past known to a number of far-seeing gentlemen, who have organised themselves into a company, under the denomination of "The Universal Mining Association," for the purpose of thoroughly testing the productiveness of the auriferous rock, which is said to extend for 15 miles inland from Halifax, and yields gold at considerable depths. This company has this week shipped three of the largest sets of Walker's patent stamps ever made in this country, together with a 16-horse power engine, and amalgamating apparatus complete, on the American principle. The machinery when in full operation will crush 15 tons of rock per diem—the amalgamators being simultaneously working and securing the gold. Each of the three sets of stamps have 12 heads, each weighing 500 cwt., and have square faces of chilled iron. It is expected that the whole of the machinery will be in work on the new gold field within six weeks of the present time. Some very experienced Australian gold miners will accompany the machinery and superintend its erection and working, as the promoters of the project are determined that nothing shall be wanting to thoroughly test the commercial value of these most recent of gold discoveries. It devolves on us to mention that the whole of this massive set of machines and engines have been executed and shipped on board a vessel in the London Docks within a period of 20 days—a matter worthy of special mention, considering that these large sets are only required at considerable intervals of time, and reflects great credit on Mr. Walker for the state of efficiency in which he maintains his manufactory.

MANUFACTURE OF GAS.—The improved process of gas making, invented by Mr. John Leslie, of Conduit-street, Regent-street, which was referred to in the *Mining Journal* of June 8, has been now proved to be especially applicable to the production of gas in localities where coal is not produced, and where the expense of transport is consequently a serious item in the cost of producing gas. He has proved that from a single ton of coal (which he first distils into 168 gallons of rich hydro-carbon fluid) he can produce nearly 22,000 ft. of 20-candle gas. The advantage of first obtaining the carbon fluid is that the gas material in a ton of coal can be conveyed by any part of the globe in a vessel measuring only 1 cubic yard in size. The coal being used at the pit's mouth would cost very little, and the locality in which the gas-works might be placed would be rendered much more healthy than at present.

A company is in course of formation, and will shortly be introduced to the notice of the public, having for its object the development of an area of 50 square miles of valuable steam coal, situated within a few miles of the port of Llanelli. It is in the vicinity of the important towns of Swansea and Carmarvon, and its produce can be easily conveyed by railway to the manufacturing towns of Gloucestershire. The company will be incorporated under the title of the *LLANELLI COAL, IRONSTONE, AND TRAMWAY COMPANY*.

CLEVELAND RAILWAY COMPANY.—Notice is hereby given,

CLEVELAND RAILWAY COMPANY.—Notice is hereby given, that an ORDINARY GENERAL MEETING of the Cleveland Railway Company will be HELD on FRIDAY, the 30th day of August, 1861, at the company's offices, at West Hartlepool, in the county of Durham, at One o'clock in the afternoon, when, in addition to the ordinary business of the company, the following matters will be submitted for the consideration and determination of the shareholders, viz.:—

The creation and issue of shares for any remaining and new capital authorised by the Acts of Parliament relating to the company.
The raising of money on loan under the same Acts.
To authorise the application of the funds of the company to the stamping of proxies to be issued to the proprietors for all meetings of the company which shall be held, pursuant to the Standing Orders of either House of Parliament.

Dated August 12, 1961.

RALPH WARD JACKSON, Chairman,
CHARLES ANDREW BAKER, Sec.

CALEDONIAN RAILWAY COMPANY.—Notice is hereby given, that the NEXT HALF-YEARLY GENERAL MEETING of the Caledonian Railway Company will be HELD at the Faculty of Procurators' Hall, 62, St. George's-place, Glasgow, on TUESDAY, the 10th day of September, 1861, at One o'clock afternoon, in terms of the statute. At this meeting, in addition to the ordinary statutory business, it will be proposed to authorise the company, when and so often as the sum of £200 borrowed upon mortgages on the special security of the Lismahagow Branches, or any part of such sum shall be paid off, to re-borrow upon mortgage, on the security of the undertaking of the Caledonian Railway Company, any sum or sums of money not exceeding the amount so paid off, in terms of the Caledonian Railway (Lismahagow Branches) Act, 1860.

The transfer books will be closed from Wednesday, the 28th inst., inclusive, until after the meeting. By order of the Board, THOS. SARKELD, Chairman.
Company's Offices, Glasgow, Aug. 15, 1861. ARCH. GIBSON, Sec.

DAVIS TRACTION ENGINE COMPANY LIMITED

Present capital £25,000, in 5000 shares.
With power to issue shares for an amount not exceeding £100,000, as may be necessary.
Liability limited to the amount of shares held.

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The Most Noble the MARQUIS OF CONYNGHAM.
The Right Hon. the EARL OF CAITHNESS.
The Right Hon. Lord CLAUD HAMILTON, M.P.
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49, The Strand, W.C.

CONSULTING ENGINEER—D. K. Clark, Esq., C.E., 11, Adam-street, Adelphi, W.C.
SECRETARY—S. H. Louttit, Esq.
OFFICES,—12, PALL MALL EAST, LONDON, S.W.

The company was formed with the object of working the patent for traction engines granted to Mr. Bray. These engines are so well known by their having been of late identified with several works of great magnitude, that it is unnecessary to state how

identified with several works of great magnitude, that it is unnecessary to state here the nature of their construction. The great merit of the invention lies in the principle of the driving-wheels, which combine perfect simplicity with the greatest efficiency, and a capacity of adapting themselves by a simple method to all varieties of roads. The company is also possessed of several subsequent patents for improvements in traction engines of considerable importance and value.

The Lords Commissioners of the Admiralty have had an engine of the earliest construction on trial in Woolwich Dockyard, found its use to be attended with great economy and advantage as compared with horse labour, and they have accordingly given an order for a new one to be built for permanent service in the yard, which is to be fitted with the improvements referred to, as well as with various appliances for driving machinery, hoisting weights, &c.

The company at present have engines profitably engaged in the neighbourhood of the metropolis, while business operations are open to it in all parts of the kingdom, and indeed in nearly every part of the world. Enquiries are constantly coming from contractors, merchants, mine and colliery proprietors, manufacturers, agriculturists, and other persons whose operations call for a large employment of horse labour, who see the vast importance of taking advantage of this means of land transport as a substitute for the ex-

The case of India may be cited as a special instance: at present only the districts in the neighbourhood of the great rivers and their tributaries are well cultivated, whilst the districts of unlimited extent, and capable of producing cotton, grain, and other produce in abundance, are almost altogether neglected, solely for want of some effectual means of transport.

As was to have been expected, difficulties were at first encountered from want of experience in the arrangement and construction of the engines, but this led the directors after much consideration, to establish a small factory, for the purpose of having built under their own supervision, on the most approved principles, an engine which could be relied upon for doing the heaviest work.

The company's operations will secure a large return for the capital invested from the following sources of income :—

1. From the manufacture and sale of engines and wagons.

2. From the royalties due from manufacturers who may construct and sell engines of their own account.

3. From working contracts, and letting out engines and wagons to the public on hire.

Full prospectuses and forms of applications for shares, as well as any information respecting the affairs of the company, will be afforded on application to Mr. S. H. LECTIN, secretary, at the company's offices, 12, Pall-mall East, London, S.W.

THE ENDLESS RAILWAY TRACTION ENGINE
COMPANY (LIMITED), BOYDELL'S PATENT.
 Capital £30,000, in 3000 shares of £10 each. Deposit, 10s. per share.
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The necessity for the use of steam on common roads is now universally admitted, and the Legislature, recognising this fact, have at length removed the only obstacle to its profitable adoption, arising from the exorbitant tolls on turnpike roads, which have hitherto amounted to a prohibition, an Act of Parliament having just received the Royal Assent, which reduces the tolls for all weights drawn by steam to an equality with those for the same weights drawn by horses.

The advantages and superiority of Boydell's Endless Railway over every other system as applicable to engines and wagons, for moving heavy weights, have been thoroughly tested and proved at Liverpool, Manchester, and elsewhere, and by Her Majesty's Government at Woolwich, in Hyde-park, and in India, and the only thing now required for its extensive adoption is to provide the means for an ample supply of these traction

This company offers peculiar advantages in return for the individual exertions of proprietors.

For full prospectuses, forms of application for shares, and further particulars, apply to the secretary, F. H. HEMMING, Esq.; to the solicitors, Messrs. PAINE and LATTON; Messrs. BOYDELL and POWELL, Chester; to the company's brokers; to F. YOUNG, Esq., 5, Adam-street, Adelphi; to C. J. APPLEBY, Esq., 69, King William-street, E.C.; or to A. HALCOMB, Esq., the Docks, Gloucester.

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The business of the Medical, Invalid, and General Life Assurance Society having been amalgamated with the Albert Life Assurance Company, the united business will henceforth be carried on under the above title.

Accumulated fund exceeds	£500,000
Subscribed capital	447,180
Paid-up capital	137,000
Annual income from life premiums, upwards of.....	220,000

The new business is now progressing at the rate of more than **£25,000** per annum.

From Prof. De Morgan's report upon the last valuation of liabilities (and in 1866, at the statements of accounts, it appeared at that time that the surplus in favour of the Albert business alone, after providing for every liability, was £192,925 2s. 11d.

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aiding in the centre of the iron district. Mr. Hamblin can furnish specimens of ores of great beauty as cabinet specimens, of which the mammillary and stalactitic forms of hematite are worthy a place in any cabinet. He can also supply specimens of native copper and silver, with the accompanying minerals, many of which occur as crystals forming rare objects of interest to the collector. Collections made up of all sizes and standard prices, \$2.00 to \$25.00 (freight) to \$200. Letters of enquiry

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On account of convenience of remittance, the smallest collection which can be forwarded will be \$25 (or £5 sterling).

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JAMES RUSSELL AND SONS, CROWN TUBE WORKS, WEDNESBURY, STAFFORDSHIRE. WAREHOUSE.—51, UPPER GROUND STREET, BLACKFRIARS, LONDON, S. The Original Inventors and First Manufacturers of the Patent Wrought-Iron Tubes for Gas, Steam, Water, &c. Enamelled Tubing, and Glazed ditto. Russell and Howell's Homogeneous Tubes. And agents for G. F. Muntz's Solid Brass Tubes. Every variety of fittings. Trade mark.

LOYD AND LLOYD, ALBION TUBE WORKS, BIRMINGHAM. MANUFACTURERS OF PATENT LAP-WELDED IRON TUBES, FOR LOCOMOTIVE, MARINE, AND STATIONARY BOILERS. IMPROVED HOMOGENEOUS METAL TUBES. ALL DESCRIPTIONS OF TUBES AND FITTINGS FOR GAS, STEAM AND WATER, PLAIN, GALVANISED AND ENAMELLED. GUN-METAL STEAM GLAND COCKS, WATER GAUGES, &c.

SHORTIDGE, HOWELL, AND CO., HARTFORD STEEL WORKS, SHEFFIELD, SOLE MANUFACTURERS OF HOWELL'S PATENT HOMOGENEOUS METAL PLATES FOR BOILERS, LOCOMOTIVE FIRE BOXES, AND TUBES, COMBINING THE STRENGTH OF STEEL WITH THE MALLEABILITY OF COPPER. RUSSELL AND HOWELL'S PATENT CAST STEEL TUBES. MCCONNELL'S PATENT HOLLOW RAILWAY AXLES. For prices and terms, apply to SHORTIDGE, HOWELL, AND CO., Hartford Steel Works, Sheffield; or Messrs. HARVEY AND CO., 12, Haymarket, London.

FARRAR'S PATENT STEEL COMPANY, WARDSEID STEEL WORKS, SHEFFIELD, MANUFACTURERS OF BEST CAST STEEL, MALLEABLE AND MILD STEEL CASTINGS, SUPERIOR CAST-STEEL FILES, &c. CALL THE ATTENTION OF ENGINEERS AND ALL USERS OF FIRST-CLASS STEEL TO THE GREAT SUPERIORITY OF STEEL MANUFACTURED UNDER THIS PATENT. Prices—First quality £50 per ton. Second quality 40 " Third quality 30 "
Wardseid Steel Works, LONDON OFFICE, 21, BOW LANE, CANNON STREET WEST, E.C. Where all communications are to be addressed.

CORNISH BORER STEEL.—UPWARDS OF ONE HUNDRED AND SIXTY MINES ARE SUPPLIED WITH THIS STEEL, AND THE DEMAND FOR IT IS RAPIDLY INCREASING.—For terms, apply to R. MURPHY and Co., Forest Steel Works, near Coleford, Gloucestershire. London Agent.—Mr. W. T. HENDRY, 71, Cannon-street West, E.C.

TO COAL OWNERS AND COKE BURNERS. MACKWORTH'S PATENT COAL WASHER, OR PURIFIER.—THIS MACHINE WILL EXTRACT THE SHALE AND ALL HEAVY IMPURITIES FROM SMALL COAL AT A COST OF TWO PENCE PER TON. For particulars and references, apply to the makers, A. and T. FAY, Temple-gate Works, Bristol; or to Mr. Jos. RIDER, Basinghall-street, Leeds.

COALS.—GEORGE J. COCKERELL AND CO., Coal Merchants to Her Majesty. Cash, 25s. per ton. Best coals only.

GEORGE J. COCKERELL AND CO., Central Office, 13, Cornhill, E.C.

GEORGE J. COCKERELL AND CO., Eaton Wharf, Grosvenor Canal, and Office, 1A, Lower Belgrave-place, Piccadilly, S.W.

GEORGE J. COCKERELL AND CO., Parfitt Wharf, Earl-street, Blackfriars, E.C.

GEORGE J. COCKERELL AND CO., Sunderland Wharf, Peckham Canal, S.E.

WIRE-ROPE TESTING. PUBLIC TEST OF A. J. HUTCHINGS AND CO'S PATENT WIRE-ROPE AT LIVERPOOL, FEBRUARY 27, 1861. [From the Daily Post of March 1, 1861.]

On Wednesday, the 27th of February, a series of EXPERIMENTS ON WIRE-ROPE took place at the Corporation Testing Works, King's Dock. The specimens tested were manufactured by the well-known firm of A. J. HUTCHINGS AND CO., of Millwall, London, the Contractors to the Lords of the Admiralty and various foreign Governments, the character of whose rope is so well known in this country, as well as all parts of the Continent. Capt. Ducraft, of H.M.S. *Hastings*, and a number of other gentlemen connected with shipping, were present to witness the experiments, all of which were considered highly satisfactory, and in every respect sustained the reputation of the manufacturers. The following are the results of the experiments.

An 8 in. rope bore 70 tons WITHOUT BREAKING. Circumference and breaking strain.

Size.	Hutchings and Co's wire-rope for ships' rigging. Tested Feb. 27, 1861.	Newall and Co's. Test of Oct. 29, 1860.	Garnock, Bibby, and Co's. Test, Oct. 29, 1860.
2 1/4	5 tons 15 cwt.	7 tons 15 cwt.	8 tons 16 cwt.
3 1/4	11 " 14 "	16 " 10 "	18 " 5 "
4 1/4	22 " 8 "	16 " 10 "	18 " 5 "
5 1/4	22 " 10 "	18 " 15 "	26 " 10 "
6 1/4	29 " 10 "	18 " 15 "	26 " 10 "
7 1/4	37 " 15 "	18 " 15 "	26 " 10 "

N.B.—The 2 1/4, 3 1/4, and 4 1/4 in. ropes were the actual sizes tested. The remaining sizes and strains are comparative.

THE ABOVE ROPES ARE FOR COLLIERY USE.

The above tests certified by Mr. McDonald the Superintendent of the Corporation Testing Works, Liverpool.

HEMP AND WIRE-ROPES. JOHN STEPHENS AND SON, HEMP AND WIRE-ROPE WORKS, ASHFIELD, FALMOUTH, CORNWALL. MANUFACTURERS OF FLAT AND ROUND HEMP AND WIRE-ROPES, GUIDE RODS FOR SHAFTS, GALVANISED WIRE SIGNAL LINE AND STRAND FENCING, &c., for MINES, RAILWAYS, &c.

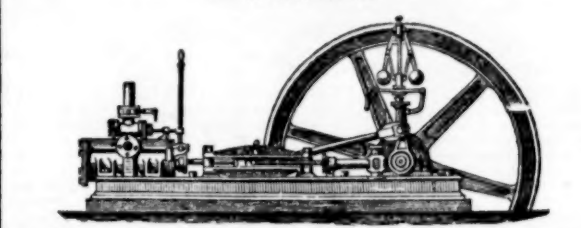
A first-class medal was awarded to JOHN STEPHENS AND SON for their manufacture, by the Royal Cornwall Polytechnic Society, in 1860.

PATENT SAFETY FUSE.—THE GREAT EXHIBITION PRIZE MEDAL WAS AWARDED TO THE MANUFACTURERS OF THE ORIGINAL SAFETY FUSE, BICKFORD, SMITH, DAVEY, and PRYOR who beg to inform Merchants, Mine Agents, Railway Contractors, and all persons engaged in Blasting Operations, that, for the purpose of protecting the public in the use of a genuine article, the PATENT SAFETY FUSE has now a thread wrought into its centre, which, being patent right, infallibly distinguishes it from all imitations, and ensures the continuity of the gunpowder. This Fuse is protected by a second Patent, is manufactured by greatly improved machinery, and may be had of any length and size, and adapted to every climate. Address.—BICKFORD, SMITH, DAVEY, and PRYOR, Tuckingmill, Cornwall.

MESSRS. W. BRUNTON AND CO. have great pleasure in informing their customers and friends, and the mining community, that they have RESUMED MANUFACTURING, at their PENNELLECK WORKS, POOL, near CAMBORNE, and are PREPARED as before to SUPPLY SAFETY FUSE OF A QUALITY WHICH CANNOT BE SURPASSED. BRANCH WORKS, BRYMBO, NEAR WREXHAM.

SARL AND SONS, 17 AND 18, CORNHILL, respectfully SOLICIT A VISIT to their magnificent ESTABLISHMENT. The ground floor is more particularly devoted to the display of FINE GOLD JEWELLERY, GOLD AND SILVER WATCHES, and FINE GOLD CHAINS. The SILVER PLATE DEPARTMENT is in the gallery of the building, and consists of every article requisite for the table and sideboard. In the magnificent show-rooms is displayed a large and beautiful stock of ARGENTINE PLATE, the manufacture of which has stood the test of 20 years' experience. SARL AND SONS have also fitted up a separate show-room for the display of DRAWING AND DINING ROOM CLOCKS of the most exquisite designs. Books containing drawings and prices may be had upon application. SARL AND SONS, 17 AND 18, CORNHILL, LONDON.

MESSRS. E. PAGE AND CO., VICTORIA WORKS, BEDFORD, AND LAURENCE POUNTNEY PLACE, CANNON STREET, LONDON. MANUFACTURERS OF



HIGH PRESSURE STEAM ENGINES, from 2 1/2 to 30 horse power, and upwards, adapted for MILLS, AGRICULTURAL, MINING, and GENERAL PURPOSES. The following sizes are ready for immediate delivery, and may be seen at any time at their London depot:—

ONE 5 in. cylinder, 10 in. stroke.	ONE 12 in. cylinder, 36 in. stroke.
TWO 8 in. cylinder, 18 in. stroke.	ONE 14 in. cylinder, 36 in. stroke.
ONE 10 in. cylinder, 18 in. stroke.	ONE 17 in. cylinder, 36 in. stroke.
ONE 14 in. cylinder, 24 in. stroke.	TWO 20 in. cylinder, 36 in. stroke.

Prices and full particulars sent on application.

MESSRS. KNOWLES AND BUXTON, CHESTERFIELD, MANUFACTURERS OF PATENT TUBULAR TUYERES.



Having been very successful in MANUFACTURING AND REPAIRING THE PATENT TUBULAR TUYERES, and securing our patent for a further term of years, we have great pleasure in offering them to the public, at a considerable REDUCTION IN PRICE. Our manner of repairing will make them as LARGE AND GOOD AS WHEN NEW (which is not the case with the ordinary tuyere) for half the first cost, when there is not more than two coils destroyed at the nozzle, all parties returning them carriage paid, and are confident they will be the cheapest and best ever offered to the mining world. The PATENT TUBULAR TUYERES having maintained a most honourable reputation since their introduction, and been thoroughly proved to answer all the purposes set forth by the proprietors (when properly treated), it is, therefore, deemed unnecessary to publish a list of the patrons, or enumerate cases of their success. Although by such a procedure very much might be said in their favour, yet the readers would never be so fully convinced of their sterling worth as by a practical trial.

The future scale of prices will be as follows, including sockets:—

No. 1 Tuyere, 16 in. long	28s. each.
No. 2 " 18 "	32s. "
No. 3 " 20 "	36s. "
No. 4 " 22 "	40s. "
No. 5 " 24 "	44s. "

Delivered at Chesterfield station. Terms, nett cash quarterly.

BAILEY'S PATENT STEAM GAUGE.—This truly valuable invention is most undoubtedly the only gauge ever invented not affected by those atmospheric changes and many other evil influences, which are the bane of all spring, mercurial, and compressed air gauges.

The grand principle of the gauge being founded upon that sublime law of nature, "GRAVITY," which, like all other natural laws, is unerring and unchangeable—it must continue to indicate correctly to an indefinite period of time.

After most critical trials and examinations by some of the most eminent locomotive and stationary engineers, mining and manufacturing companies in this kingdom, it is pronounced by them to be "THE ONLY TRULY INDICATING GAUGE NOW IN EXISTENCE."

HEAD OFFICES: 30, COOPER STREET, MANCHESTER. Mr. WM. TATE, Sole Wholesale Agent.

ALBION TURRET CLOCK WORKS, SALFORD, MANCHESTER.

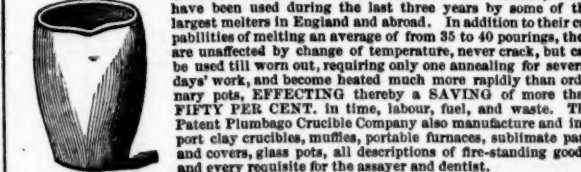
BASTIER'S PATENT CHAIN PUMP, APPARATUS FOR RAISING WATER ECONOMICALLY, ESPECIALLY APPLICABLE TO ALL KINDS OF MINES, DRAINAGE, WELLS, &c. J. U. BASTIER begs to call the attention of proprietors of mines, engineers, architects, farmers, and the public in general, to his new pump, the cheapest and most efficient ever introduced to public notice. The principle of this new pump is simple and effective, and its action is so arranged that accidental breakage is impossible. It occupies less space than any other kind of pump in use, does not interfere with the working of the shafts, and unites lightness with a degree of durability almost imperishable. By means of this hydraulic machine water can be raised economically from wells of any depth; it can be worked either by steam-engine or any other motive power, by quick or slow motion. The following statement presents some of the results obtained by this hydraulic machine, as daily demonstrated by use:—

- 1.—It utilizes from 90 to 92 per cent. of the motive power.
- 2.—Its price and expense of installation is 75 per cent. less than the usual pumps employed for mining purposes.
- 3.—It occupies a very small space.
- 4.—It raises water from any depth with the same facility and economy.
- 5.—It raises with the water, and without the slightest injury to the apparatus sand mud, wood, stone, and every object of a smaller diameter than its tube.
- 6.—It is easily removed, and requires no cleaning or attention.

A mining pump can be seen daily at work, at Wheel Concord Mine, South Sydenham, Devon, near Tavistock; and a shipping pump at Woodside Graving Dock Company (Limited), Birkenhead, near Liverpool.

J. U. BASTIER, sole manufacturer, will CONTRACT TO ERECT HIS PATENT PUMP AT HIS OWN EXPENSE, and will GUARANTEE IT FOR ONE YEAR, or will GRANT LICENSES to manufacturers, mining proprietors and others, for the USE of his INVENTION. OFFICES, 19, MANCHESTER BUILDINGS, WESTMINSTER, LONDON. London, Oct. 10, 1859. Hours, from Ten till Four. J. U. BASTIER, C.E.

TO BRASSFOUNDERS, ENGINEERS, REFINERS, &c.—THE PATENT PLUMBAGO CRUCIBLE COMPANY beg to CALL THE ATTENTION of all users and shippers of melting pots to the GREAT SUPERIORITY OF THE PATENT CRUCIBLES, which have been used during the last three years by some of the largest refiners in England and abroad. In addition to their capabilities of melting an average of from 35 to 40 pourings, they are unaffected by change of temperature, never crack, but can be used till worn out, requiring only one annealing for several days' work, and become heated much more rapidly than ordinary pots, EFFECTING thereby a SAVING of more than FIFTY PER CENT. in time, labour, fuel, and waste. The Patent Plumbago Crucible Company also manufacture and import clay crucibles, muffles, portable furnaces, sublimate pans and covers, glass pots, all descriptions of fire-standing goods, and every requisite for the assayer and dentist.



Also, sole proprietors of fine POWDERED PURE FLOUR PLUMBAGO, which they can confidently recommend for anti-friction purposes, being an impalpable powder, and warranted perfectly free from grit and any impurity. For ordinary polishing purposes it will be found superior to any of the black lads offered. Price, £27 10s. per ton; 30s. per cwt. Samples of 28 lbs. forwarded on receipt of 8s. Packages free.

For Lists, Testimonials, &c., apply to the BATTERSEA WORKS, London, S.W.

HALEY'S PATENT LIFTING JACK, MANUFACTURED BY THE INVENTOR, JOSEPH HALEY, ALBION STREET, GAYTHORN, MANCHESTER.

SCREW JACKS, SHIP JACKS.

SLIDE AND CENTRE LATHES, PLANING, SHAPING, BORING, DRILLING, SCREWING, WHEEL CUTTING, AND OTHER MACHINES.

RIVET MAKING MACHINES.

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Assays and Analyses of every description performed as usual. Special Instruction in Assaying and Analysis. Consultations in every branch of Metallurgical and Manufacturing Chemistry. Assistance rendered to intending Patentees, &c. For amount of fees, apply to the office, as above.

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THE MINING SHARE LIST.

DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Dividends Per Share.	Last Paid.
4000	Bedford United (copper), Tavistock	2 6 8	4 1/2	4 1/2	12 7 0	0 3 6—June, 1861
2400	Boscan (tin), St. Just	1 0 0	50	50	33 0 0	1 10 0—May, 1861
200	Botalack (tin, copper), St. Just	1 0 0	210	210	443 5 0	2 10 0—Feb. 1860
1000	Carn Brea (copper), Illogan	1 0 0	70	66 58	269 10 0	2 0 0—Feb. 1860
2048	Carnyorth (tin), St. Just	1 0 0	33	33	0 19 6	0 2 0—Sept. 1860
300	Carn Breweyn (lead), Cardiganshire	1 0 0	33	33	0 0 0	4 0 0—April, 1861
80000	Concorree (copper, sulphur), L. E. 11	1 0 0	34	1 1/2	0 0 0	0 9 0—July, 1861
2450	Cook's Kitchen (copper), Illogan	1 0 0	25 1/2	24 25	0 8 0	0 8 0—May, 1861
12000	Copper Miners of England	25 0 0	25	25	7 1/2 per cent.	Half-yrly.
350000	Ditto ditto (stock)	100 0 0	24	24	1 per cent.	Half-yrly.
1055	Cradock Moor (copper), St. Cleer	8 0 0	28	28	5 13 0	0 5 0—July, 1861
867	Cwm Erddin (lead), Cardiganshire	7 10 0	16 1/2	16 1/2	5 8 0	1 0 0—June, 1861
128	Cwmystwith (lead), Cardiganshire	60 0 0	240	240	227 10 0	5 0 0—May, 1861
200	Derwent Mines (all-lead), Durham	300 0 0	355	350 355	142 0 0	5 0 0—June, 1861
1024	Devon Gl. Con. (cop.), Tavistock	1 0 0	355	350 355	760 0 0	7 0 0—July, 1861
335	Dolcoath (copper), Camborne	128 17 6	610	610	633 10 0	7 0 0—Aug. 1861
512	East Basset (cop.), Redruth	29 10 0	75	75 80	87 0 0	5 0 0—July, 1861
2048	East Caradon (copper), St. Cleer	2 14 6	24 1/2	25 1/2	0 17 6	0 10 0—July, 1861
300	East Darnell (lead), Cardiganshire	32 0 0	67	67	77 10 0	1 0 0—Aug. 1861
2048	East Wharfedale (tin), Wenden	2 10 0	—	—	0 5 0	0 5 0—July, 1859
1400	Fyarn Mining Co. (lead), Derbyshire	5 0 0	—	—	20 3 4	0 10 0—May, 1861
4940	Fowey Consols (copper), Tywardreath	4 0 0	5	5	41 9 3	0 2 6—June, 1860
2500	Foxdale, Isle of Man, Limited (lead)	25 0 0	33	33	61 8 3	1 0 0—Dec. 1860
5000	Frank Mills (lead), Devon	3 18 0	—	—	0 11 0	0 3 0—July, 1861
6000	Great South Tolgus (S.E.), Redruth	0 14 6	3 1/2	3 1/2	7 13 6	0 5 0—Feb. 1861
1708	Great Wheel Foundry, Breage	18 0 0	11 1/2	11 1/2	1 0 0	0 10 0—July, 1861
5000	Great Wh. Vor (tin, cop.), Helston	40 0 0	—	—	0 5 0	0 5 0—May, 1861
1024	Herodsfoot (id.), near Liskeard	8 10 0	34	34 36	14 10 0	2 0 0—June, 1861
1000	Hibernian Mine Company	92 6 2	—	—	6 15 0	0 15 0—Feb. 1861
100	Levant (copper), tin, St. Just	2 10 0	95	95	1091 0 0	5 0 0—May, 1860
400	Lisburne (lead), Cardiganshire, Wales	18 15 0	125	125	375 10 0	2 0 0—Aug. 1861
5000	Marke Valley (copper), Cardigan	4 10 0	10 1/2	10 1/2	1 1 0	0 5 0—July, 1861
5000	Mendip Hills (lead), L. Somerset	3 15 0	1 1/2	1 1/2	1 1 0	0 2 6—May, 1860
1800	Miners Mining Co. (L.), Wrexham	25 0 0	180	180	75 0 0	0 5 0—Aug. 1861
1000	Miners of Ireland (cop., lead, coal)	7 0 0	14 1/2	14	14 7 11	0 7 0—June, 1861
6400	Mount Pleasant, Mold	4 0 0	25	25	12 15 7	1 0 0—May, 1861
6000	New Birch Tor and Vitrifer Consols	1 6 4	2	1 1/2	0 2 6	0 2 6—May, 1861
6000	North Downs (copper), Redruth	2 3 4	4 1/2	4 1/2	0 2 6	0 2 6—Aug. 1861
1360	North Gribbler, Redruth	2 7 6	—	—	0 10 0	0 10 0—Mar. 1861
6000	North Great Work, Breage	1 3 0	4 1/2	4 1/2	0 2 0	0 2 0—May, 1860
5000	Ossend (lead), Flintshire	0 8 0	1 1/2	1 1/2	0 6 6	0 9 0—May, 1861
6400	Par Consols (cop.), St. Blazey	50 0 0	8 1/2	8 1/2	36 4 6	0 5 0—July, 1861
200	Parys Mines (copper), Anglesey	100 0 0	435	435	7 10 0	2 10 0—April, 1861
200	Phenix (copper), tin, Llanfyllter	100 0 0	435	435	449 10 0	55 0 0—May, 1861
1772	Pobber (tin), St. Agnes	—	—	—	6 9 6	0 15 0—April, 1861
1120	Providence (tin), Uny Lelant	10 6 7	35	33 35	59 15 0	1 0 0—May, 1861
16	Rhosomere (tin), Uny Lelant	50 0 0	—	—	1250 0 0	100 0 0—
512	South Caradon (cop.), St. Cleer	1 5 0	305	305	251 0 0	5 0 0—July, 1861
512	South Tolgus (cop.), Redruth, Cornwall	8 0 0	40	40	103 10 0	1 0 0—July, 1861
496	South Wheel Franks, Illogan	18 14 9	122 1/2	125 130	355 8 0	1 0 0—July, 1861
280	Spearne Moor (tin, copper), St. Just	31 17 9	45	45	9 18 0	1 0 0—June, 1861
940	St. Ives Consols (tin), St. Ives	8 0 0	31	31	484 0 0	0 15 0—May, 1861
9600	Tamar Con. (all-lead), Redruth	4 10 0	—	—	5 6 0	0 2 6—Jan. 1861
6000	Tincroft (cop., tin), Pool, Illogan	9 0 0	5 1/2	5 1/2	10 8 6	0 5 0—Feb. 1861
6000	Tolvaddon (copper), Marazion	—	3 1/2	2 1/2	0 13 6	0 3 0—Mar. 1860
672	Trevelyan Consols (tin), St. Ives	11 10 0	12 1/2	12 1/2	7 0 0	0 10 0—Sept. 1860
200	Trumpet Consols (tin), near Helston	67 10 0	100	100	52 0 0	2 0 0—May, 1861
1024	Wendron Consols (tin), Wendron	11 13 10	16	10 12	8 15 0	1 0 0—Jan. 1861
6000	West Basset (copper), Illogan	1 10 0	16	14 16	21 15 0	0 5 0—July, 1861
600	West Burton Hill (lead), Yorkshire	50 0 0	—	—	14 10 0	3 0 0—June, 1861
1024	West Caradon (cop.), Liskeard	5 0 0	40	37 39	98 1 3	1 10 0—July, 1861
256	West Darnell (copper), Redruth	37 0 0	55	55	45 0 0	0 5 0—May, 1861
6400	West Fowey Consols (tin and copper)	7 10 0	5	5	0 14 0	0 2 0—Feb. 1861
400	W. Wh. Seton (cop.), Camborne	47 10 0	295	300 310	315 0 0	7 0 0—Aug. 1861
212	Wheel Basset (copper), Illogan	5 2 6	90	87 1/2	572 10 0	2 0 0—Aug. 1861
256	Wheel Buller (cop.), Redruth	5 0 0	95	95	929 0 0	2 0 0—May, 1861
600	Wheel Clifford (cop.), Gwennap	—	150	150	93 0 0	3 10 0—Aug. 1861
2000	Wheel Falmouth and Sperris	2 5 0	8	8	0 10 0	0 10 0—Feb. 1861
128	Wheel Friendship (copper), Devon	50 0 0	90	90	2490 10 0	5 0 0—Feb. 1861
512	Wheel Jane (silver-lead), Kea	3 10 0	13	13	10 10 0	1 0 0—Feb. 1860
1024	Wheel Kitty (tin), Uny Lelant	1 7 2	11	11	8 0 0	0 10 0—Sept. 1860
4800	Wheel Liskeard (tin), St. Ives	1 7 6	3 1/2	3 1/2	1 8 0	0 5 0—Jan. 1861
896	Wh. Margaret (tin), Uny Lelant	9 17 6	42 1/2	38 49	68 0 0	1 10 0—May, 1861
100	Wheel Mary (tin), Lelant	36 2 4	40	40	280 5 0	7 0 0—June, 1860
1024	Wh. Mary Ann (id.), Menheniot	8 0 0	8 1/2	9 1/2	33 17 6	0 10 0—June, 1861
400	Wh. Mary (tin), St. Just, Cornwall	70 0 0	300	300	280 13 0	5 0 0—Aug. 1861
6000	Wicklow (copper), L. Wicklow	5 0 0	59	58 1/2	41 17 6	2 12 6—Mar. 1861

* Dividends paid every two months. † Dividends paid every three months.

MINES WITH DIVIDENDS IN ABEYANCE.

760	Aberdovey (silver-lead), Merioneth	1 10 0	30	30	0 10 0	0 10 0—Mar. 1859
5120	Alfred Consols (cop.), Wharfedale	1 17 1	19 1/2	19 1/2	20 0 0	0 2 6—Jan. 1859
1200	Boscan (tin), St. Just	1 1 0	12	12	12 5 0	0 2 6—Apr. 1861
1000	Brightside & Froggatt Grove, Derbyshire	3 0 0	3 1/2	3 1/2	3 0 0	3 0 0—Apr. 1861
2500	Central Miners (lead) [L. E.]	0 15 0	5 1/2	5 1/2	0 4 0	0 4 0—Sept. 1859
6000	Charlotte United, Fernaneth	2 3 2	1 1/2	1 1/2	0 13 0	0 1 6—Sept. 1859
2000	Colliam (copper), Lamerston	5 5 0	12	12	3 5 0	0 8 0—Dec. 1857
256	Condurow (cop., tin), Camborne	20 0 0	60	60	85 0 0	2 0 0—Dec. 1857
256	Copper Hill (copper), Redruth	48 0 0	90	90	2 10 0	2 10 0—Sept. 1859
4076	Devon and Cornwall (copper)	4 16 3	6	6	0 10 0	0 2 6—Feb. 1859
672	Ding Dong (tin), Gwilt	39 2 6	19	19	16 7 6	1 10 0—Mar. 1857
1200	Drake (tin), Gwilt	2 10 0	14 1/2	14 1/2	0 13 0	0 2 6—Sept. 1857
4076	East Falmouth (all-lead), Kenwyn, Kern	2 15 0	14 1/2	14 1/2	0 13 0	0 2 6—Jan. 1858
128	East Pool (tin, copper), Pool, Illogan	24 5 0	400	400	305 0 0	2 15 0—Jan. 1858
6000	General Mining Co. for Ire., (cop., id.)	4 0 0	5 1/2	5 1/2	1 0 0	0 3 0—June, 1858
486	Gribbler and St. Aubyn (cop.) [S. E.]	47 10 0	11	10 12	23 0 0	1 0 0—July, 1860
119	Great Work (tin), Gwennap	100 0 0	110	110	221 10 0	7 10 0—Feb. 1857
200	Harward United (lead), Flintshire	40 0 0	10	10	3 0 0	1 10 0—July, 1860
6000	Hingston Down Con. (cop.), Camb. [S. E.]	4 18 0	2	1 1/2	2 16 0	0 2 6—Nov. 1856
5000	Kelly Bray (lead, copper), Callington	4 6 0	1 1/2	1 1/2	0 6 0	0 2 0—Feb. 1860
30	Lacey Mining Company, Isle of Man	100 0 0	1200	1200	1420 0 0	0 60 0—June, 1857
470	West Fowey Consols (tin and copper)	7 10 0	5	5	0 6 0	0 2 6—Feb. 1858
700	North Rosecar (copper), Camborne	16 0 0	18	18	157 0 0	4 0 0—Sept. 1858
1024	Rosewarne and Herland United	11 8 10	35	35	2 10 0	0 10 0—Oct. 1859
812	Rosewarne United (cop., tin), Gwinnar	6 4 2	24	24	33 10 0	1 0 0—Sept. 1860
12000	Sidgford Con. (cop.), Whitcombe [S. E.]	0 16 0	11 1/2	11 1/2	0 10 0	0 2 6—July, 1857
128	South Ormside (tin), St. Austell	19 0 0	285	285	60 0 0	0 20 0—June, 1858
30000	St. Day United (tin and cop.), Redruth	2 7 0	—	—	0 3 6	0 1 0—Feb. 1858
400	United Mines (copper), Gwennap	55 0 0	32 1/2	32 1/2	80 5 0	2 10 0—April, 1860
30000	Valley of Towry (lead), Carnarvon	0 13 6	62	62	0 5 0	0 1 0—July, 1858
1024	West Fowey Consols (tin and copper)	7 10 0	5	5	33 1 9	0 10 0—April, 1857
240	Wheel Hall (tin), St. Just	15 0 0	16	16	0 5 0	0 5 0—Mar. 1858
4096	Wheel Edward (cop.), Calstock	7 7 6	2 1/2	2 1/2	0 5 0	0 5 0—Mar. 1858
1024	Wheel Gwilt (tin), Fernaneth	1 4 0	4	4	1 12 0	0 7 6—Nov. 1859
6000	Wheel Kitty (tin), St. Agnes	4 16 6	3 1/2	3 1/2	0 18 6	0 2 0—July, 1860
345	Wheel Lovell (tin), Wendron	33 0 0	7	7	31 0 0	1 0 0—Sept. 1856
1024	Wheel Margery (tin, copper)	15 13 0	4 1/2	5 6	0 10 0	0 10 0—May, 1860
396	Wheel Mary (tin, copper), Camborne	58 10 0	80	65 70	131 15 0	1 10 0—Dec. 1859
1040	Wh. Trelawny (all-lead), Liskeard	5 17 10	14	13 14	43 16 0	1 0 0—Oct. 1860
1024	Wh. Trelawny (tin), Gwinnar	12 12 6	16	16	10 2 6	0 7 6—Jan. 1854
4096	Wheel Wrey Consols (lead), St. Ives	3 9 0	—	—	2 12 6	0 2 6—Feb. 1857

FOREIGN MINES.

2464	Barras Burra (cop.), South Australia	5 0 0	135	135	265 0 0	5 0 0—June, 1861
12000	Cobra Copper Co. (cop.), Cuba [S. E.]	40 0 0	37	35 37	97 12 0	1 0 0—July, 1861
10000	Copiapu Mining Company, Chile [S. E.]	16 0 0	8	8	6 8 0	0 5 0—Jan. 1861
18000	East Indian Coal, Calcutta [L. E.]	10 0 0	10	10	7 1/2 per cent.	Yearly.
70000	English and Australian [S. E.]	5 0 0	3 1/2	3 1/2	1 5 0	0 2 6—Aug. 1861
25000	Gen. Mining Assoc., New South Wales [S. E.]	2 1/2	2 1/2	2 1/2	1 5 0	1 0 0—June, 1861
60000	Kapunda Mining Co. (Australia) [S. E.]	1 0 0	2 1/2	2 1/2	8 6 2	0 3 4—July, 1861
18000	Lisburne (id.), Pozo Ancho, Spain [S. E.]	3 0 0	7 1/2	7 1/2	0 13 0	0 3 4—July, 1861
10000	Lunaria (id.) of Portugal [S. E.]	2 0 0	2	2	0 13 0	0 1 6—Aug. 1861
108815	Mariguat and New Granada [S. E.]	1 0 0	1 1/2	1 1/2	0 9 6	0 1 6—July, 1859
100000	Port Phillip (gold), Clunes [S. E.]	1 0 0	1 1/2	1 1/2	0 4 0	0 1 0—July, 1861
11000	St. John del Rey [L.], Brazil [S. E.]	15 0 0	36	35 36 1/2	43 5 0	2 10 0—June, 1861
20000	West Canada Mining Company [L.]	1 0 0	1 1/2	1 1/2	0 2 0	0 2 0—June, 1860

FOREIGN MINES WITH DIVIDENDS IN ABEYANCE.

10000	Altan and Quenangen (tin), (cop.) [L. E.]	4 10 0	3	3	4 5 0	0 15 0—Nov. 1853
10000	Bar. Bar. Land, Min. Ac. N. Ze. [L. E.]	4 5 0	3 1/2	3 1/2	15 per cent.	May, 1859
10000	Pontgibaud (all-lead), France [S. E.]	20 0 0	4	4	1 0 0	1 0 0—Jan. 1855
43714	U. Mexican (all-lead), Mexico [S. E.]	20 0 0	4 1/2	4 1/2	1 16 0	0 4 0—Feb. 1863

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
20000	Australian (copper), South Australia [S.E.]	7 6 8	1 1/2	1 1/4	Sept. 1858
75000	Bon Accord, South Australia (copper) [L. £1] [S.E.]	0 17 6	1 1/2	1 1/2	Feb. 1858
6000	Central American (silver) [L.]	5 0 0	8 1/2	—	Feb. 1858
17000	Central Italian (copper) [7000 £2 paid]	0 6 0	—	—	Jan. 1858
60000	Clarendon Consols (copper), Jamaica [S.E.]	0 17 6	—	—	Jan. 1858
10000	Coplapo Smelting [L.] Chile	10 0 0	8 1/2	—	Fully paid
75000	Dun Mountain (copper), New Zealand [L.] [S.E.]	1 0 0	1	—	Fully paid
30000	East Kongsberg Native Silver Mining Co. of Norway [L. £5]	1 0 0	—	—	April, 1858
00000	Ellerslie and Bardowie, Jamaica	0 18 0	1 1/2	—	July, 1858
00000	Ellerslie and Canadian Mining Company [L.]	5 0 0	—	—	Fully paid
25000	Fortuna (lead), South Australia [L. £2] [S.E.]	2 0 0	2 1/2	2	Fully paid
80000	Great Northern (copper), South Australia [L. £2] [S.E.]	2 0 0	—	—	Fully paid
4000	Hope Silver-Lead and Copper Mining Co. [L.] Jamaica	25 0 0	1 1/2	1 1/2	Fully paid
60000	Imperial Thessalian (lead, &c.), Thessaly [L. £2]	0 10 0	—	—	June, 1858
30000	Lagunazo (sulphur, copper), Portugal [L. £1]	0 10 0	—	—	May, 1858
60000	New Granada (gold), South America [S.E.]	1 0 0	—	—	Fully paid
10000	New Grand Duchy of Baden (silver-lead), near Freiberg	1 0 0	1	—	Nov. 1858
60000	North Rhine Copper of South Australia [L. £1] [S.E.]	0 12 6	—	—	June, 1858
15000	Pachusa Silver Mining Company, Mexico [L. £1]	0 18 0	1 1/2	—	April, 1858
30000	Scottish Australian Mining Company [L. £1]	0 10 0	—	—	Nov. 1858
15000	South Europe Mining Company, Spain [L. £5]	3 0 0	—	—	Nov. 1858
50000	St. John's United (copper), Newfoundland [L. £1]	0 10 0	—	—	May, 1858
45000	Victor Emanuel, Italy [L.] [20,000 Fr. Shares, 6s. pd. 2600 £1 pd.]	1 0 0	1 1/2	—	Mar. 1858
12000	Western Africa Malachite (copper) [L.]	110 0 0	—	—	Oct. 1858
10000	Wheel Ellen, South Australia [L. £5]	4 0 0	—	—	July, 1858
35000	Wheel Jamaica (copper)	1 0 0	16s.	—	Fully paid
80000	Worthing (copper), South Australia [L.] [S.E.]	1 0 0	—	—	Fully paid